UNIVERSITY OF CINCINNATI

October 21 , 20 03

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hereby submit this as part of the requirements for the degree of:

Master of Arts

in:

Classics

It is entitled:

Settlement Hierarchy and the Location of Alashiya on Cyprus

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SETTLEMENT HIERARCHY AND THE LOCATION OF ALASHIYA ON CYPRUS

A thesis submitted to the

Division of Research and Advanced Studies
of the University of Cincinnati

in partial fulfillment of the
requirements for the degree of

MASTER OF ARTS

In the Department of Classics

2003

by

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B.A., University of Ottawa, 2000

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Abstract

This thesis investigates the socio-political character of Late Bronze Age (LBA) Cyprus during the sixteenth to fourteenth centuries BC primarily from an archaeological point of view. Past theories concerning this subject suggest that a centralized political authority ruled Cyprus during this time period. Such suggestions are used to support the hypothesis that Cyprus was Alashiya (a kingdom mentioned in contemporary fourteenth century texts from various kingdoms). While it is the general assumption of scholars that the two were universal equivalents, there is no concrete evidence for such an interpretation.

Enkomi, an LBA site, has been used to support the idea that Cyprus entered an early form of statehood beginning in the LBA. The supposedly large extent of the settlement, the wealth of its archaeological remains, and its metallurgical facilities are said to suggest that it was the capital of Alashiya. While this theory seems possible, a number of other LBA cities existed that appear to have been equivalent, or even superior, to Enkomi in these terms. All such settlements were located along the coast of the island and present a discrepancy in comparison to the smaller, seemingly less wealthy inland LBA sites. Arguments based on these types of archaeological evidence are risky because much of the ideological component of political cultures is often not apparent in archaeological remains. Alternative models can be constructed. Which of these settlements then, if any, exerted control over other coastal sites on the island?

This thesis assesses the relevant evidence from exacavations and archaeological surveys to test the validity of the claims made by past scholarship. The conclusion shows there is no sound archaeological proof to support the theory that a centralized, island-wide political authority existed on Cyprus at any time during the LBA, no proof that any coastal LBA site

exerted control over others, and no proof to show that Cyprus and Alashiya should be considered to be synonymous. Until more illustrative archaeological material comes to light, the responsible interpretation is that the socio-political character of Cyprus was regional, and Alashiya, if a part of Cyprus, was one of those regions.

Preface

I came to the study of the socio-political and socio-economic landscape of Late Bronze Age Cyprus through my research on various aspects of the island's economy and its involvement in foreign trade at the time. I became quite interested in the connection between Alashiya (a kingdom mentioned in contemporary fourteenth century texts from various kingdoms) and Cyprus that has long been suspected, though the precise nature of this connection remains unclear. It seemed to me that it was the general assumption of scholars that the two were universal equivalents even though there was no concrete evidence for such an interpretation. While I did not, and do not, doubt that Cyprus was the most probable candidate for the location of Alashiya, I became interested in the minority voice that argued that Cyprus was never a unified state under the rule of a single king.

Further research illustrated to me that the other essential component in the argument that the whole of Cyprus equaled Alashiya was the excavation of the earliest known and most thoroughly excavated Late Bronze Age site on Cyprus, Enkomi. Since its excavation, Enkomi

has often been used to support the idea that Cyprus entered an early form of statehood at its transition to the Late Bronze Age. Scholars referred to the supposedly large extent of the city, the wealth of its archaeological remains, and its industrial facilities for copper ore processing to suggest that it was the capital city of the Kindom of Alashiya. While this theory seemed possible, I realized that there were a number of other Late Bronze Age cities that seemed to be equivalent, or even superior, to Enkomi in terms of their size, wealth, and specialized production activities. All of these were located, as Hector Catling observed, on and around the coast of the island and presented a vast discrepancy in comparison to the smaller, seemingly less wealthy inland Late Bronze Age sites. Which of these, if any, exerted a dominance over other major, coastal sites on the island?

In light of these realizations, I wanted to set aside the textual evidence and to turn to the archaeological evidence alone to see what it illustrated about the political character of Cyprus during the Late Bronze Age. This thesis is the culmination of my attempt to look at the question primarily from an archaeological point of view. It is my belief that once regional studies and intensive surveys have clarified the nature of the Late Bronze Age settlement system, then scholars will know the proper way (if there is one) in which to apply the toponym of Alashiya to the island, whether it is a regional polity or the island itself.

Acknowledgments

This thesis is for George Armstrong and for Ross Boyce.

Many people contributed in some way to the completion of this document. I would like to thank just a few of them here. First of all, I have to mention Hector Catling, a scholar that I have not had the privilege to meet. Without his work on the Bronze Age settlement patterns of Cyprus, the consequent academic discussion upon which this thesis is based may not have existed at all.

Thanks must go next to my advisors in this endeavor. Since my arrival here in Cincinnati, Prof. Gisela Walberg has fostered my interest in Cyprus through her Bronze Age classes and seminars, and was also kind enough to allow me to participate in her excavations on the island itself. Always supportive and understanding, Prof. Walberg was an excellent supervisor, making herself constantly available with advice and guidance throughout the entire process of researching and writing this document.

Prof. Jack Davis, the reader of this thesis, was also more than generous with his time and patience in editing the successive drafts of my work. His thoughtful questions and observations concerning each were essential to creating the final draft now before you. His effort and dedication were exemplary.

A great thank you to both of them for teaching me so much.

Thank you also to Prof. Michael Sage, Dr. Stephen Thompson, Kathleen Quinn, David Kime, Tisha Gangopadhyay, Pauline Boyce, Janet, Ken, Scott, Tig and Suki Armstrong, and especially to Erin Williams. For all of their words of support and encouragement, I am eternally grateful. Finally, to the individual, who first introduced me to Cyprus quite some time ago and nearly killed me in the process, thank you so very much for making it “nearly.”

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CHAPTER ONE

INTRODUCTION

This thesis attempts to explore the various hypotheses concerning the nature of the settlement pattern on Cyprus during the early period of the Late Bronze Age. There is a good deal of evidence from this period that is indicative of the societal developments that occurred on the island at the time. Scholars are generally agreed upon the fact that during the Late Cypriot I period (LCI) some sort of political transformation took place. It is, however, the nature of this change that is heavily debated. Some would like to envisage that the external political and economic forces of other contemporary kingdoms on the fringes of Cyprus finally forced it into political maturity at a very rapid pace, producing an island-wide, central authority that controlled the entirety of the island.[1] This authority was supposedly centered on the site of Enkomi and has been equated with the kingdom called Alashiya, identified in texts from other contemporary

[1] Knapp 1997, p. 47; Keswani 1996, pp. 219-220.

societies in the eastern Mediterranean and the Near East, such as the Hittite and Egyptian kingdoms.[2]

The connection between Cyprus and Alashiya was made on the basis of textual and excavation evidence. Akkadian texts from Amarna identify Alashiya as a country with a king and as a major copper supplier for Egypt. The excavated evidence from Cyprus shows that its major coastal polities were involved fairly extensively in specialist activities revolving around the processing of copper ore. Enkomi appears to have been the first settled out of these major sites, and was also the first to be excavated by archaeologists. Some of the smaller, inland settlements on Cyprus were involved in the extraction of copper ore and varying degrees of processing. All of these sites, coastal to inland, were presumably organized in a hierarchical fashion in order to facilitate the movement and processing of raw resources for international trade and export. On account of these facts, the proximity of Cyprus to Egypt, and the lack of an appropriate alternative candidate, the suggestion was first put forward that Cyprus during the Late Bronze Age was the kingdom of Alashiya with Enkomi as its capital city.

Other important textual evidence, written both in Ugaritic and Akkadian, comes from Ugarit in the Near East, a city that Cyprus had significant contact with towards the end of the Late Bronze Age. One of these texts, discovered in 1994, may even name the king of Alashiya himself.[3]

More recently, a study has revealed that the material used for some of the Alashiya letters from Amarna and Ugarit originated in Cyprus. Petrographic and chemical analyses of

[2] Knapp 1990, p. 13.
[3] Knapp 1996, p. x.

approximately 300 tablets place the origin of the letters somewhere in the margin of the Troodos mountains, possibly around Kalavasos or Alassa.[4]

Yet, other scholars have preferred to see Cypriot society throughout the Late Bronze Age (LBA) as being more 'heterarchical,' the island being composed of numerous independent regions governed each by its own central authority. There are a few successive references to Alashiya in foreign texts between the eighteenth and fifteenth centuries. These are no more than passing references to the place-name and never describe Alashiya in any detail as a kingdom or a land with a king. The majority of texts referring to Alashiya, including the Amarna letters, date to the fourteenth century, the beginning of the Late Cypriot II period (LCII), a time when the archaeological evidence seems to suggest that Cyprus was organized into a number of different regional polities rather than being politically unified. This period also represents the peak of Cyprus' involvement in metallurgical activities and trade. If Alashiya is in fact to be located on Cyprus, then during this period it was likely one of the regional polities that existed on the island at the time. The notion that Alashiya is Cyprus itself would in this light have to be abandoned. This would coincide well with the fact that Cyprus appears to have been regionalized politically in the preceding Middle Cypriot (MC)[5] and in the subsequent Cypro-Geometric and Archaic periods.[6]

Arguments extending this idea of regionalism backwards to LCI are often dismissed as retrospective, being based on the overwhelming settlement evidence from LCII. The number of major settlement sites that have material dated to LCI is few. As Enkomi has long been considered the only LBA coastal site to have significant foundations at this date, it has been

[4] Goren et al. 2003, p. 233.
[5] Catling 1962, pp. 139-141.
[6] Iacovou 1994, pp. 149-166.

suggested by some that LCI was the phase early in the LBA during which Enkomi exercised an island-wide authority as the capital of Alashiya.

One of the main concerns of this study is whether or not there is any evidence to show that Cyprus was politically unified prior to LCII. Theories concerning both the LCI and II periods are based overwhelmingly on excavated data and on little data from intensive or extensive surveys. Ideally, regional studies would constitute a major component in discussing the nature of LBA Cypriot settlement or society.[7] Such data for Cyprus is still quite limited, though this does not diminish the value of the systematic surveys that have been conducted.

Throughout the course of this thesis, both the excavation and survey data will be examined in an attempt to demonstrate that little settlement evidence as of yet exists from which any conclusions can be drawn concerning the socio-political character of Cyprus during LCI. It will attempt to show that, as in LCII and in the later Archaic period, there is no evidence for the existence of a politically centralized island-wide polity centered on Enkomi during LCI. All of the evidence points strongly toward regionalism.

[7] Knapp 1997, p. 36.

CHAPTER TWO

A SURVEY OF RECENT SCHOLARSHIP

The notion of a connection between Cyprus and Alashiya originated with nine key contemporary texts that belong to a group of tablets that come from the "royal archives" of Tell el-Amarna in Egypt, in the vicinity of the ancient and short-lived capital of the heretic pharaoh Akhenaten, Akhetaten.[1] Tell el-Amarna is located on the eastern bank of the Nile, 300 km south of Cairo. The Amarna tablets were composed of sun-dried clay and were written primarily in Babylonian and West-Asiatic scripts. By the 1970s nearly 400 such "Amarna" texts from around the Mediterranean had been collected. They have been dated to the 18th dynasty of Egypt and span a relatively short amount of time (1400-1350 BC, corresponding to roughly the first three quarters of LCII on Cyprus).[2]

The nine texts are Akkadian documents (EA 33, 34, 35, 36, 37, 38, 39, 40, and 114) and suggest that Alashiya had a king, who was in control of the kingdom's vast copper resources.

[1] Hellbing 1979, pg. 1.

Lennart Hellbing describes the tablets as letters directed usually to the pharaoh, but also to other key political figures in Egypt. When the letters were exchanged between "more or less equal parties, the word of address is 'brother.'"[3] Otherwise, the pharaoh is referred to as 'king.' The king of Alashiya is one of the individuals who addresses the pharaoh as brother, a clue that suggests that the two men were equal in status. The Amarna documents record quantities of goods traded between Egypt and other kingdoms. In the case of Alashiya, the more abundant goods listed in the texts include timber, cattle, oil, beams for ships, and ivory. Foremost, however, is copper. It features in the amount of 100 talents of copper in EA 34, possibly in the amounts of 200 and 500 talents of copper in EA 33 and 35 respectively.[4] It has been calculated that there was a minimum export of 897 talents of copper to Egypt over 25 years based on the Amarna letters.[5] It is, thus, the presence of LBA mining and smelting facilities and the apparent wealth of the coastal cities of Cyprus that have made the equation between Alashiya and Cyprus so attractive.

While Cyprus is a valid candidate for the locality of the kingdom of Alashiya, the theory has not been accepted without some hesitation. The problem arises in the discussion of how the toponym 'Alashiya' should be applied to the island. The evidence from the texts is ambiguous at best. They refer to Alashiya as both a 'country' and as a 'city,' although it is never mentioned as an island.[6] It has also been remarked that if Alashiya is only a part of Cyprus, then we would know nothing of the other kingdoms that existed on the island at the same time, and, therefore, Alashiya must compose the entirety of Cyprus.

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[2] Hellbing 1979, pg. 3-4; Knapp 1997, pg. 66.
[3] Hellbing 1979, pp. 1-2.
[4] Translations of texts taken from Moran 1992, see Appendix.
[5] Knapp 1986, pg. 84.
[6] Hellbing 1979, pg. 68. Alashiya is, however, involved in shipbuilding and naval battles, particularly with the Hittites.

It should be observed also that none of these texts, or texts like them, was discovered on Cyprus itself. Contemporary Cypriot textual evidence may exist in the Cypro-Minoan script, though such writing is rare and currently not deciphered.[7] It is often said to have been found in administrative contexts and is used to support the notion of a hierarchical society and at least the regional control of an elite population. The lack of textual evidence equivalent to that found in the kingdoms surrounding Cyprus during the LBA is a unique and unsolved mystery, although it has been suggested that such documents likely existed but on perishable materials.[8] No investigation has been undertaken to explain why documents survived in other nearby areas while Cypriot examples presumably crumbled to dust.

The initial excavator at Enkomi, C.F.A. Schaeffer, argued that Enkomi itself was Alashiya.[9] He believed that Enkomi flourished as a copper exporting city from 1600 to 1200 BC on the basis of the existence of copper workshops, ingots, and metal tools found during excavations. Schaeffer also cited as evidence the sanctuaries and religious artifacts from Enkomi, especially the "Ingot God." He believed that this established a connection between Cypriot LBA metallurgical practices and religious practices. Yet none of the evidence for religious activity at Enkomi dates to any time prior to LCII.[10] This is true for both the Sanctuary of the Horned God and the Sanctuary of the Ingot God, both discussed prominently in the debate concerning state formation on Cyprus, yet originating in archaeological contexts dating to LCIII. This means that none of the religious material at the site can be used to make assumptions about the socio-political or socio-religious status of Enkomi during LCI.

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[7] Knapp 1990, p. 1.
[8] Webb 1999, pp. 306-307.
[9] Schaeffer 1962, pp. 27-35.
[10] Webb 1999, pp. 99-112, 223-228.

Porphyrios Dikaios, the second excavator to carry out fieldwork at Enkomi, took a more cautious approach to the question. He stated that metallurgical activity at the site was not extensive during the LCI period, and that it was certainly not enough to produce the amount of metal objects and ingots presumed to have been exported from Cyprus based on the Alashiya documents.[11] According to him, Enkomi reached its peak of metallurgical processing during the habitation of Level IIB towards the end of LCII, too late to be mentioned in the Amarna letters. As well, he added that there is no evidence during LCI that Enkomi was the center of a state,[12] that it was hardly an important kingdom in the early 14th century. Catling echoed Dikaios's doubts that Cyprus "had achieved an appropriate degree of importance by the date of the Amarna letters."[13] He also pointed out that Enkomi's metallurgical activities did not make it unique amongst LBA sites on the island.

Bernard Knapp has been one of the most prominent supporters of the existence of a unitary state on Cyprus during what he terms the Protohistoric Bronze 1 period (ProBA1), which covers essentially the MCIII and the Late Cypriot (LC) I periods.[14] The early appearance of Enkomi and its connection with metallurgical activity has prompted Knapp to identify Enkomi as the central political force of the kingdom of Alashiya.[15] Others, like James Muhly and Edward Peltenburg, have agreed with this identification though it is still problematic for some.[16]

In an attempt to compensate for the ambiguity of the textual evidence, a broad range of archaeological data has been employed to support the equation of Cyprus with Alashiya. Foremost among these is settlement size. Knapp points out that Enkomi appeared at the beginning of the ProBA1 (in MCIII) slightly before at least three other coastal sites at the end of

[11] Dikaios 1971, pp. 534-536.
[12] Dikaios 1971, pp. 534-536.
[13] Catling 1965, p. 205.
[14] Knapp 1997, pp. 35, 65.

ProBA1: Hala Sultan Tekke, Morphou-*Toumba tou Skourou*, and Kourion (Episkopi *Bamboula*).[17]

Knapp finds support for his theory in the elite presence that is presumed to have existed at Enkomi. This elite was, according to Knapp, a political ruling class that emerged sometime during ProBA1 in response to a growing demand of foreign states for Cypriot copper. In her unpublished dissertation, Priscilla Schuster Keswani discussed the nature of this elite class.[18] Different lineages, according to her, are evident in the funerary assemblages of Enkomi (i.e., in the form of wealthy graves and prestige goods: for example, exotica like ostrich eggs, weights and scales, etc.).[19] By Knapp's way of thinking, this elite sprang quickly into existence as its members took action to benefit from the demand for copper.[20] It was only by their efforts and the establishment of an efficient copper transport and production system that the island was able to meet the massive demand for copper in international trade that scholars have identified in the Amarna texts.[21] In other words, Cyprus, pressured by the existence of other more advanced states surrounding it, entered a phase of 'secondary state formation' with Enkomi as its capital.

Other evidence indicating the existence of a political elite may come in the form of seals and seal impressions found at many coastal sites on the island such as Hala Sultan Tekke, Enkomi, and Episkopi-*Bamboula*.[22] In other Mediterranean and contemporary societies (i.e., on Crete) this type of evidence is regarded as having administrative significance. Knapp also cites as evidence sealings found on pithoi sherds and almost exclusively on Plain White Handmade

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[15] Knapp 1997, pp. 65-66.
[16] See Muhly 1989; Peltenburg 1996 (both supporting Knapp); Merillees 1992 (opposed to Knapp).
[17] Knapp 1997, p. 56.
[18] Keswani 1989a.
[19] Keswani 1989b, pp. 68-69.
[20] Knapp 1988, 70-72.
[21] Knapp 1997, pp. 62, 66.
[22] Knapp 1986, pp. 37-42.

Ware storage jars (over 40 found at 8 sites on the island).[23] The iconography of these seals, he says, was "aegeanizing" and almost invariably displayed chariot scenes (but also hunting scenes and bulls), possibly in a further attempt to consolidate the authority of the political elite.[24] In some cases, the appearance of an oxhide ingot in the sealing may be evidence of the use of a local ideology for symbolism and for the legitimization of power.[25] It is also suggested that the appearance of the Cypro-Minoan script on the island may have some political or administrative significance though it is unclear whether the script was ever used in these contexts.[26]

Keswani has opposed the notion that Cyprus was an island ruled by a central, island-wide authority during the Late Bronze Age. First, she points out that there are no architectural or functional consistencies in the contemporary buildings of Late Bronze Age Cyprus. As evidence, Keswani points to what she calls the "highly variable ashlar residences and administrative buildings at Hala Sultan Tekke, Kalvasos, Maroni, and Maa; and the pillared 'Sanctuary of Aphrodite' at Kouklia."[27] She adds that "likewise, none of the buildings appear to be minireplicas of public buildings found at Enkomi."[28]

Four other facts are central to her arguments 1) while LBA Cypriot society seemed to have shared a "complex of ideological and prestige symbolism" there is no "iconographic evidence of subordination to a common central authority."[29] In addition, according to Keswani, there is no evidence of a "coherent, replicated complex of administrative technology (seals, written records) used to maintain links between the secondary and paramount centers."[30] 2) Cypro-Minoan does not appear to have been used in economic contexts. 3) The settlement size

[23] Knapp 1997, p. 52.
[24] Knapp 1997, p. 52.
[25] Knapp 1986, pp. 25-29.
[26] Keswani 1993, p. 75.
[27] Keswani 1993, p. 74.
[28] Keswani 1993, p. 74.
[29] Keswani 1993, p. 75.

estimated for other large habitation centers, such as Hala Sultan Tekke and Kition does not support "the notion of a hierarchy centered on Enkomi."[31] 4) Lastly, Keswani points out that in funerary assemblages, prestige goods and imports such as Mycenaean kraters have a wide dispersal throughout the coastal centers, rather than a "hierarchical distribution of symbols of authority with the most extraordinary status goods at a single site."[32] Her conclusion is that these valuables were obtained independently by local elites at each coastal site.

Robert Merrillees has opposed Knapp's views more strongly and denies the existence of a connection between Alashiya and Cyprus. He says, "The idea that the island [Cyprus] was a kingdom ruled from Enkomi *Ayios Iakovos* in the Late Cypriote period is a figment of the imagination,"[33] and that hypothesis is the result of "the academic schizophrenia induced by attempting to reconcile the mute archaeological data with the conviction that the ancient place name of Alashia lies in Cyprus."[34] His arguments to support this opinion are very similar to Keswani's: 1) the unreliability of settlement size in determining the political status of a settlement, 2) the wide dispersal of LBA wealth or prestige goods amongst the known settlements, 3) and the lack of reliably identified LBA secular buildings.[35] Based on these observations, Merrillees suggests that each Late Cypriot settlement should be considered to have its own civil administration and that the notion of a unitary state should be discarded.[36]

Muhly's interpretation of the LBA Cypriot copper industry supports Knapp's perspective. According to Muhly, the widespread distribution of metallurgical materials and the facilities for

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[30] Keswani 1993, p. 75.
[31] Keswani 1993, p. 75.
[32] Keswani 1993, p. 75.
[33] Merrillees 1992, p. 310.
[34] Merrillees 1992, p. 311.
[35] Merrillees 1992, pp. 318-323.
[36] Merrillees 1992, p. 315.

processing them indicate a common method of copper production for all of Cyprus.[37] Enkomi appears to have been heavily involved in this method of copper production from early in its history onward based on tuyères found at the site, dating from LCIA down to LCIII. Muhly also suggests that since copper was being processed and produced at several different wealthy coastal sites, the entire island ought to be identified with Alashiya.[38] Thus, in his view, the multiple kingdoms of later Archaic Cyprus were established as "regional production centers" during the 13th century BC by the "central kingdom of Alashiya (ruled from Enkomi)."[39]

Peltenburg dismisses Keswani's arguments against an emergent state centered on Enkomi by saying that they are based primarily on evidence excavated from ProBA2, which represents the politically decentralized period at the end of the Late Bronze Age, rather than ProBA1.[40] Like Knapp and Muhly, Peltenburg suggests that demand for Cypriot copper from external sources prompted the development of social complexity on Cyprus. This social complexity emerged in the form of a political elite that served to organize and oversee the extraction and production of copper. The political elite was represented by the appearance of large and wealthy coastal sites (as described above). These sites established a regional infrastructure that governed the procurement of copper from inland mining sources.

Jennifer Webb has written recently on the subject and though she sees some merit in Keswani's arguments, she in no way sees them as definitive. Webb feels, like Knapp and Peltenburg, that Keswani's theories "reveal the strong bias in the archaeological record toward sites and residues" of ProBA2-3.[41] The criticism here is that arguments against an island wide political authority are retrospective based on societal conditions evident in the later ProBA, from

[37] Muhly 1989, p. 303
[38] Muhly 1989, pp. 299-301.
[39] Muhly 1989, pp. 302-303.
[40] Peltenburg 1996, p. 28.

LCII and onward when the island was divided into a number of regional polities. Webb suggests that this tells us little of the societal conditions extant in the 16th, 15th and 14th centuries BC.[42]

While Webb acknowledges that the lack of written documentary sources and sealings on Cyprus is problematic, she does not view this condition as fatal to theories supporting an island-wide polity.[43] Only one seal has been found on Cyprus that has been identified as being Cypriot in origin. Otherwise, the only evidence for the use of seals found on Cyprus are the rolled impressions found on large storage jars (mentioned above) and on basins. These have been found primarily in 13thcentury BC contexts and are larger than extant stone cylinders, indicating that in the LCIIC period, a system of making impressions with wooden sealings was practiced.[44] The lack of seals on Cyprus may be because such objects were made out of perishable materials, since a good number of sites with administrative facilities has now been excavated and no actual seals have been found (although, Webb says "sealings are the correlates of seal function in virtually all ancient administrative systems"[45]). Webb also disagrees with Keswani's proposition that there is no evidence of subordination on the island to a central authority.[46] Inconographic themes are evident, she says, in the use of BR bull rhyta in mortuary contexts, as well as in the existence of female terracotta figurines in habitation and burial contexts from the 15th century BC and onward. She adds:

> "Substantial commonalities in the style and content of glyptic iconography and the repeated depiction of particular deities and motifs also assume a structured, centralized belief system and a manipulated ideology of authority, worked out through objects which were both operative tools and prestige goods symbolic of affiliation and status. As highly

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[41] Webb 1999, p. 305.
[42] Webb 1999, p. 305.
[43] Webb 1999, pp. 306-307.
[44] Webb 1999, pp. 306-307.

> mobile devices probably engraved by attached specialists, seals are likely to have been powerful mechanisms of organizational control in the dispersed regional systems which characterize the archaic state model."[47]

Yuval Goren, Shlomo Bunimovitz, Israel Finkelstein, and Nadav N'aman, in their petrographic analyses of the Amarna tablets, have demonstrated that the material used to produce these documents originated somewhere in the foothills of the Troodos mountain range. Based on this and in agreement with Knapp, they have postulated that Alashiya is indeed Cyprus itself.[48]

The preceding review of current scholarship shows that there is a general consensus that during LCII, the period to which the Amarna letters date, Cyprus was organized politically at a regional level. There was no ruling authority that possessed a universal, centralized control of the island. Thus, if the fourteenth century texts naming Alashiya do refer to Cyprus, Alashiya must be a regional polity, not the entire island. Those scholars who adhere to the traditional viewpoint that Alashiya itself was Cyprus have turned to the theory that Cyprus was unified politically in the earlier LCI period and that LCII represents the splintering of that state into different political factions. Is there then any evidence that Cyprus was politically unified in MCIII/LCI? If one site, or a number of sites, exercised a degree of control over other LCI settlements, then the archaeological remains should imply a hierarchical ranking in the settlement system. As seen in the preceding discussion, Enkomi has long been assumed by some to be the peak of such a tiered network. The following chapter reviews the excavated evidence in an attempt to show that the archaeological record for LCI is too incomplete to draw any conclusions about the socio-political character of Cyprus during that period.

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[45] Webb 1999, pp. 306-307.
[46] Webb 1999, p. 307.
[47] Webb 1999, p. 307.
[48] Goren et al. 2003, p. 248.

CHAPTER THREE

THE EVIDENCE FROM EXCAVATIONS

This chapter aims at discussing the types of evidence most commonly cited by scholars in the context of early state formation on Cyprus, what we may logically infer from these types of evidence, and the actual material present at the key sites involved in the debates surrounding this issue. The overall purpose of this chapter is to determine whether the relevant excavated evidence supports certain scholars' claims of an island-wide central authority during the LCI period. See Figure I for a general map of the sites mentioned in this chapter.

THE COASTAL SITES

The following is a summary of LC sites commonly discussed in the context of state formation on Cyprus.

Enkomi

Enkomi, commonly regarded as being the dominant site of the LBA on Cyprus, is located on the eastern coast of the island, near the sea. It is the most extensively excavated and best known LC site. Limited evidence shows that the site was founded by the end of the MCIII period (Level A). Theories concerning the development of a central authority on Cyprus during this period tend to center around Enkomi. The LCI activity at the site focused around what has been termed by its excavators the Area III Fortress and some poorly preserved domestic type structures south of the fortress.

The fortress itself saw two periods of occupation, Levels IA and IB. Both levels provide evidence of metallurgical activity. This area, Area III, seems to have become the traditional copper working spot of the site.[1] Smelting occurred at Enkomi from the 17th century and onward to ca 1200 BC. The Level IA fortress contained grinders, tuyères, and a pit presumably used for smelting. Throughout Level IB there was more extensive evidence in a number of rooms in the fortress on multiple floors of occupation.[2] This evidence includes multiple tuyère fragments, some in place between floorings, slag, ashes, hearths and floor burnings, as well as a number of crucibles and grinders.[3] There are no examples of ingots at the site before Level IIB and the ones that do appear are nearly all miniature in size (i.e., votive in nature).[4]

Dikaios' and Catling's hesitations concerning the significance of this material has been noted in Chapter One, but based on the evidence from this fort, Knapp is prepared to envision the dominance of the settlement over Cyprus during the LCI period:

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[1] Dikaios 1971, pp. 501-506.
[2] Dikaios 1969, pp. 21-34.
[3] Dikaios 1969, pp. 21-34.
[4] Dikaios 1969, 294.

> "On the basis of the current archaeological record, Enkomi still appears to be a dominant, unique, and independent power throughout the course of the ProBA1 period (about 1700-1400 BC). The other key sites, represented by a much more limited material (and excavation) record, were widely scattered across the island. Was this perhaps a deliberate strategy orchestrated by Enkomi to preclude organized response by disparate local elites?"[5]

The metallurgical material excavated at Enkomi may have debatable significance, but a thorough analysis of the mortuary record at Enkomi by Keswani has enhanced our understanding of the character of the elite group present there during the LBA. The distribution of prestige goods in cemetery contexts, especially of gold, has allowed Keswani to demonstrate that the society there was stratified as early as the LCII period if not before.[6] It has also shown that a large portion of the LCII population may have had claims to elite status, especially in comparison to the "outlying communities whose mortuary complexes are poorly represented to date."[7] Keswani has also been able to group burials into competing elite factions or families.

Yet such evidence does not support the notion of a unified, ruling elite class present at Enkomi that exercised its authority over all of the resources of Cyprus. In addition, very little of the mortuary record dates to the MCIII/LCI period (ProBA1) when it is argued that Cyprus was ruled by a unified elite political stratum in LBA society. This evidence is therefore not completely relevant to the question of an island-wide state during the LCI period. Few graves seem to date as early as LCIA and many of these are in a very disarrayed state. Consequently, there is little evidence as to the nature of social organization at Enkomi in MCIII/LCI.[8]

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[5] Knapp 1997, p. 65.
[6] Keswani 1989b, pp. 68-69.
[7] Keswani 1989, p. 68.
[8] Keswani 1989, pp. 57-62.

In a related discussion, there is in reality very little evidence for the extent of habitation of Enkomi during this time period. As pointed out above, the evidence consists only of the fortress in the northernmost area of the site and limited remains of domestic activity in the south. These remains represent "single habitations on a plan comprising three aisles surrounding a central open space."[9] Thus, there is little evidence that can be used to determine the actual extent of the site during MCIII/LCI. Estimations for the settlement's size during all periods of habitation are limited by the extent of excavations and our inability to approach the site at present (due to the current political situation on Cyprus). Therefore, the assumed dominance of Enkomi based on settlement size presents us with a problem, since even after extensive excavations it cannot be shown to be as large as its greatest estimated settlement size during the LCI period (see Figure 2).

Another significant observation is that some of the other forts in Enkomi's vicinity have foundations contemporary to Enkomi and are similar in their layout and extent to the Area III fortress. Examples are Nitovikla (founded in MCIII) and Nikolidhes (founded in LCI).[10] Thus, the archaeological record suggests that there are other comparable, possibly equivalent, sites to Enkomi during this early period. How these sites were related and organized remains unclear.

In terms of trade, Enkomi may have dominated Levantine trade and may have had special relations with Ugarit in the later LBA.[11] Yet during the LCI period the nature of this foreign contact is unclear (though it no doubt existed in some form). The earliest administrative evidence that comes from Enkomi dates to LCIB and is limited to six inscribed handles and a sherd, as well as one Cypro-Minoan tablet.[12] This meagre evidence does not provide a solid foundation for

[9] Åström 1972a, p. 26.
[10] Peltenburg 1996, 30-35; Åström 1972a, pp. 30-35.
[11] Catling 1962, p. 144.
[12] Dikaios 1971, p. 502.

Knapp's suggestion of a uniform system of iconography or uniform ideology focused on the administrative authority of Enkomi over the entire island.

In summary, the preceding discussion has shown that during LCI, Enkomi is by no means the largest site on the island. Other sites exist that are comparable. There is little evidence to support theories of its dominance. Evidence exists only that demonstrates Enkomi's defensive character (like other contemporary forts of the period) and its involvement in industrial activities.

Morphou *Toumba tou Skourou*

Toumba is a site that is for the most part lost to us today. Early reports and excavations suggested that it was a settlement "approaching the size and importance of Enkomi."[13] Dikaios spoke of a fortress discovered at the site after spending a day digging test trenches,[14] and Catling spoke of its extensive size and vast potential. Bulldozing in the 50s took away any hope of reconstructing what was probably an important site of LBA Cyprus. The bulldozing reduced the mound to a length of 66 m east to west and 36 m north to south. Its height was originally measured at 44 m above sea level with bedrock at around 40 m. The bulldozing reached bedrock over half of the mound and changed the geography of the mound significantly.[15]

The site lies just north of Morphou on the bank of the dried up Ovgos river, west of the Morphou-Myrtou road, and was founded upon a "hummock consisting of of gray-green clay-shale and havara bedrock, a little withdrawn from the bank of Ovgos river."[16] In ancient times there was a marshy lake in the vicinity of the site and at the time of its establishment the site may have been right on the sea. While Vermeule says this is impossible to prove, the river was at

[13] Catling 1962, p. 142.
[14] Vermeule 1990, p. 13.
[15] Vermeule 1990, pp. 14-17.
[16] Vermeule 1990, p. 8.

least navigable by boat into the past century. Thus, she says, the town would have had a 'marine' character.[17]

When Vermeule took up excavations at the site after the bulldozing, there was only time for one season before the political turmoil of 1974 intervened. The mound of *Toumba tou Skourou* was completely excavated revealing a potter's workshop and another mound was only superficially explored, though it demonstrated some potential. Vermeule stated that other mounds in the near vicinity may have exhibited similar potential. She was unable to locate Dikaios' fortress.

What remained of the site consisted of five sections: the Mound, the Basin, the fill, houses, and tombs. A substantial amount of Proto-White Slip, White Slip I, and Base Ring I[18] dates the earliest levels of *Toumba tou Skourou* to the LCI period. Due to the bulldozing of the site, the highest part of the Mound represented its earliest habitation levels, LCIA and IB. The Mound itself, "a rectangle filling the north center of the site, is braced on the north by a thirty meter long retaining and terrace wall (East-West 4) dug into the bedrock, which here falls away to the north. A series of successive floors, low benches, and walls occupied this level."[19] The pottery here dated the levels to LCIA and B and included Red Polished, Black Slip, White Painted, Black Slip Reserved Slip, and early White Slip I. The early floors were covered with destruction debris from early industrial installations.

The Basin Building was located on the south face of the Mound. Fourteen metres wide and 6 m deep, this building was composed of "good stone walls, packed around the base with river stones and fine black pebbles filled with potsherds."[20] These sherds included Proto-Base

[17] Vermeule 1990, p. 9.
[18] Vermeule 1990, pp. 363-365, 393.
[19] Vermeule 1990, p. 19.
[20] Vermeule 1990, p. 19.

Ring, Base Ring I, White Slip I, Red Polished, Black Slip and White Painted. Thus, the Basin dates to the period when the Mound was first built up. A pebble ramp led up to the Basin Building from west to east on the south front and is also dated to LCIA and B by its ceramic fill.[21] Against this ramp at the south of the site three structures that Vermeule termed 'houses' were excavated. The easternmost of these, House B, had its earliest foundation in LCIA and was occupied until LCIIB. Its rooms contained large pithoi. The tombs at the southeast of the site contain material dating from MCIII to LCIB.

A limited amount of metallic slag exists at *Toumba tou Skourou*, as well as some tuyères, but there is no evidence of architecture or installations associated with metallurgical production. Once regarded as the "Enkomi of the west" Vermeule finally interpreted it as a "potter's quarter of LBA combined with unpillaged tombs."[22]

As Vermeule suggests, however, the approximate settlement size of Toumba is not likely to be represented by the extent of excavation.[23] Ancient walls were reported throughout fields all around the site, which at the time of its uncovering were undergoing intensive agricultural activity. There are many other smaller mounds surrounding *Toumba tou Skourou*. Eyewitness accounts from the workmen who bulldozed the site suggest that *Toumba tou Skourou* was the largest. Their machines had trouble with a "mass of walls, a mudbrick mound with internal stone braces."[24] They claimed that large blocks, possibly ashlar, lay about on the surface, dragged up by the action of the bulldozers. The workmen also spoke of "foundations down to the sea," large terracotta water pipes, and bright red roof tiles.

[21] Vermeule 1990, p. 21.
[22] Vermeule 1990, p. 397.
[23] Vermeule 1990, pp. 14-17.
[24] Vermeule 1990, p. 16.

Aerial photographs of the Toumba apparently revealed several other mounds in the immediate vicinity, only one of which, *Toumba tou Tyllirou*, was explored. It was characterized by the same mudbrick walls (some with plaster facings) as *Toumba tou Skourou*. Finds at *Tyllirou* included sherds of Proto-White Slip,[25] White Slip I, Bichrome ware, very fine Base Ring I, pithoi, stone grinders, querns, and "outlying walls at lower level than the mound."[26] High, sometimes plaster-faced mudbrick walls with stone foundations indicated to Vermeule that Tyllirou was "in a sense a twin mound to *Toumba tou Skourou*."[27] *Tyllirou* was bulldozed in 1973.

While Dikaios' and Catling's "Enkomi of the West" was never uncovered, there are many fascinating and suggestive finds from *Toumba tou Skourou*. These include a number of items of prestige value, such as cylinder seals, an ostrich egg, Minoan and Mycenaean pottery and an Egyptian scarab.[28] *Toumba tou Skourou*'s early involvement in trade may be indicated by the Late Minoan IA cups and jugs recovered from Tomb I, and the few fragments of Late Minoan IA sherds found in the stratigraphy of the settlement.[29] This foreign material attests to the presence of at least a small wealthy elite at the site and a distinct role of the settlement in Cypriot trade. The site may have been directly involved in the export of manufactured Cypriot goods (ceramic production) at a date early in LCI.

In summary, the suggestion is that *Toumba tou Skourou* represents the remains of a much larger and extremely significant LBA settlement. Vermeule speculated in her final report on the site that the mounds in the vicinity were all connected, functioning as single entity.[30]Such a reconstruction has potential. Only future intensive survey work in the area (impossible because it

[25] Vermeule 1990, p. 397.
[26] Vermeule 1990, p. 15.
[27] Vermeule 1990, p. 15.
[28] Vermeule 1990, pp. 326-354.

is now located on the Turkish side of the Green Line) has the potential to recover what has been lost in the area due to modern intrusions. Thus, until that time arrives, *Toumba tou Skourou* cannot be discounted as a major coastal site. Certainly it has enough early material to compare to the scant MCIII/LCI remains at Enkomi.

Kouklia *Palaeopaphos*

Late Bronze Age activity at *Palaeopaphos* is extremely limited and contributes little to discussion. The excavated remains cover an area of 1200 m from north to south,[31] and it has been suggested they could cover the same distance east to west.[32] These remains include the monumental BA sanctuary, Sanctuary I.[33]Ceramics date it primarily to LCII.[34] Survey in the region, however, shows LCI occupation in the region, specifically along the Potamos Dhiarizos, and limited quantities of material close to the coast.[35] Citing scatters of MC material as evidence and the "spatial distribution of tomb groups," Keswani suggests that an "extensive settlement or cluster of settlements must have developed during the Late Cypriot period, reaching its maximum extent in LC III."[36] LCI cemeteries have long been known in the region.[37]

Hala Sultan Tekke

A significant feature of Hala Sultan Tekke is its position on what was probably once a natural harbour or inlet that gave access to the sea and provided shelter for ships. The site is

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[29] Vermeule 1990, pp. 406, 416, 437-438.
[30] Vermeule 1990, p. 397.
[31] Courtois 1990.
[32] Maier and von Wartburg 1985, pp. 147, fig. 2.
[33] Maier 1987, p. 7.
[34] Webb 1999, p. 62.
[35] Bilde 1993, pp. 6-7.
[36] Keswani 1996, p. 233.
[37] Swiny 1981.

located on the west bank of the Larnaka Salt Lake, close to the southeast coast of Cyprus. The harbour seems to have silted up around 1000 BC.[38]

Ample evidence from cemetery contexts shows that the site and the surrounding region were occupied during the LCI and II periods.[39] On account of this evidence, Keswani suggests that southeast Cyprus was more densely populated before the rise of urban centers in comparison to the areas of *Toumba tou Skourou* and Enkomi. Hala Sultan Tekke, however, became very significant in LCII-III. At this time, the site may have been as large as ca. 24 ha.[40] Sanctuary architecture and finds of a metallurgical nature are all datable to these periods.[41] The metallurgical finds include abundant amounts of copper slag, tuyères, and moulds for casting various objects, such as jewelry, rectangular plaques, a tripod stand, and possibly pieces of armour.[42]

Items of prestige value at the site include Levantine, Aegean, Egyptian, and Anatolian pottery, an Egyptian sceptre-head, other objects with Egyptian cartouches, and a silver bowl with a Canaanite inscription.[43] These all come from LCIII contexts. On the basis of its size and wealth in foreign exotica, Paul Åström has suggested that the existence of Hala Sultan Tekke, so close along the coast to both Enkomi and Kition, poses a major threat to theories of political-centralization that focus on Enkomi as a capital city.[44]

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[38] Åström 1996, p. 9.
[39] Keswani 1996, p. 227.
[40] Knapp 1997, p. 54.
[41] Webb 1999, pp. 127-130.
[42] Åström 1996, p. 9.
[43] Åström 1996, p. 12.
[44] Åström 1996, p. 12.

Kition

Kition, like *Palaeopaphos* on the west coast, has provided little evidence as yet for the LCI period. Its LCII incarnation may have been as large as ca. 70 ha.[45] It has been removed from this discussion because it has not produced any LCI material at all (though no doubt some form of earlier settlement should be located beneath or near the LCII site). As Keswani has pointed out, a good deal of LCI activity in this region is known from mortuary contexts.

Kalavasos *Aghios Dhimitrios* and Maroni *Vournes*

Near the Vasilikos valley, on gently sloping, low lying terrain, lies the LBA site of Kalavasos *Aghios Dhimitrios*, occupied in the thirteenth century and probably earlier (according to one of its excavators).[46] *Aghios Dhimitrios* is positioned 8 km south of the Kalavasos copper mining area and 6 km north of the south coast in the vicinity of a large number of MC sites. At least as early as LCIIA, the population of the area had centered on *Aghios Dhimitrios*, where it stayed until LCIIC.[47] Pottery from the site dates it mainly to the LCII period but limited amounts of MCIII and LCIA material have appeared. Chance finds of this material are common at the site, according to its excavators, Alison South and Ian Todd. It is possible that such early remains are rather more extensive since it is not clear whether all habitation phases of the site have yet been excavated.[48] Other contemporary sites are known in the area. For example, a potter's workshop is located nearby at Sanidha (producing primarily White Slip II wares) and LBA

[45] Knapp 1997, p. 54.
[46] South 1989, p. 319.
[47] South 1989, pp. 319-320.
[48] South says so far they have only cleared down to LCII levels (pers. comm.)

sherds were found at a mine.[49] Presently, the area of Kalavasos is in a military zone and a complete survey is not possible.

The nature of the metallurgical material at the site is unclear. There is no evidence of metallurgical installations. A number of small bronze and copper items, such as tools and small personal items suggests, however, that limited processing of metals may have occurred at *Ayios Dhimitrios*.[50] There was a LCII workshop in Building IX where broken tools and scrap and small pieces from ingots were found (oxhide type). It is interesting that the site is so well positioned to exploit mines and yet has given no firm evidence of metallurgical activity.

Domestic buildings at *Ayios Dhimitrios* in LCII seem to have been used for spinning and weaving, the production of oil, and maybe wine. Keswani points to large pithoi storage facilities in the pillared hall and pithoi found in situ in Building X as evidence of the importance of olive oil in Late Bronze Age Cypriot economy (organic residues commonly associated with olive oil have been identified).[51] This is a due reminder of the excessive reliance on metallurgical evidence by archaeologists trying to reconstruct Cypriot settlement patterns and the Cypriot economy of the LBA.

Maroni *Vournes*, a site similar to *Aghios Dhimitrios* and with an important LCII Ashlar Building, is located a mere six km away. The main habitation of *Vournes* is contemporary to *Aghios Dhimitrios*, but it also has earlier foundations. The nature of the material is unclear, but LCI material has been discovered in the southern portion of the site in conjunction with building remains of the period. Ceramics in trench N11, including Red-on-Black, Red-on-Red, White Painted, and Proto-White Slip, date the earliest levels at the site to LCIA.[52] About 30 m north,

[49] Knapp 1997, p. 35.
[50] South 1989, p. 320.
[51] Keswani 1993, p. 78.
[52] Cadogan 1984, p. 2.

just southeast of the Ashlar Building, a sequence of floors dating to LCIB and continuing to LCIIB have been excavated.[53] Two postholes of undetermined function belong to the earliest level. LCI material has likewise been discovered to the northeast of the Ashlar Building. The earliest foundations levels of *Vournes* have been preserved to this limited degree where they lie against the original slope of the *Vournes* hill.[54] Nevertheless, this material indicates to the excavators that "there was considerable use of *Vournes* in LCI back to LCIA."[55]

It seems unclear how the remains in the Vasilikos and Maroni valleys are to be interpreted. Were *Aghios Dhimitrios* and *Vournes* small settlements exercising power over a limited area and competing with one another economically, or was one the regional seat of a larger cooperative network, including the ceramic production center at Sanidha? According to South, the locale of *Aghios Dhimitrios* is good for inter-regional communication.[56] If it and *Vournes* were independent of one another, then the former would be the center of an area of ca 30 square km around the Vasilikos valley. It is unclear as to why these sites should be seen as unassociated, since they are only 6 km apart. Sites should not have to be physically connected to be regarded as functioning parts of the same settlement. *Vournes* could therefore be the LCI nucleus of what became a much larger LCII network of settlement that eventually stretched out to cover areas in along the Vasilikos valley. That is, if further exploration does not prove that *Aghios Dhimitrios* had an earlier LCI foundation. The site is nowhere near fully excavated and extends much further to the south.[57]

South rejects the notion that *Aghios Dhimitrios* functioned under the central authority of Enkomi. She emphasizes the fact that there is no evidence of what she refers to as the religio-

[53] Cadogan 1992, p. 51.
[54] Cadogan 1992, p. 51.
[55] Cadogan 1992, p. 52.
[56] South 1996, pp. 44-45.

metallurgy that presumably held the island-wide network together. In fact, there is no evidence at all suggesting the role played by religion at the site.[58] Geographically speaking, there does not seem to be any effective means by which Enkomi could have governed this southern region of the island, which appears to have been economically and agriculturally self-sufficient. The excavators insist that society developed along the Vassilikos valley as a "slow, self-sufficient rural society, which started to move in LCI when new settlements were founded… The new LCI settlements brought war and forts; but the major events of planting new towns and big buildings in the countryside- the real change to Mediterranean urbanism- did not come for two or three centuries."[59] They envision that the leap to organization and monumental architecture would have to have been the initiative of an individual at the local level.

Episkopi *Bamboula*

Episkopi *Bamboula*, located on the southern coast of Cyprus, was founded on a low ridge that now separates the Kouris river from the modern village of Episkopi. This region saw much ancient activity. Sites have been located that date to the Chalcolithic, Early Bronze Age, Cypro-Geometric and Cypro-Archaic periods.[60] New excavations at *Bamboula* conducted by Gisela Walberg should clarify the long-term development of the habitation of the site, especially that of the LBA and LBA/IA transitional period.

The Late Bronze Age site is located on a plateau 40 feet above a plain. It slopes down to an irrigation ditch, then drops abruptly three meters to the plain. Like Kalavasos and Maroni, *Bamboula* has a commanding position along an ancient river valley. The Kouris river valley was

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[57] South (pers. comm.) 2001.
[58] South 1996, pp. 44-45.
[59] Cadogan 1989, p. 50.
[60] Benson 1972; Weinburg 1983.

the only permanent river on the island during the Bronze Age, and must have been an important highway, as well as a source of water.[61]

LCI material is common in the graves excavated from the necropolis[62] and excavations have revealed architecture from the same period. Excavations around the hill in the 1930s revealed domestic structures of LBA date. Areas A and C revealed traces of LCIA occupation but no complete architecture from that period.[63] In Area E, however, two houses built on a "rectangular-tripartite" plan, E.I and E.II, dated to LCIA and were also occupied in succeeding periods.[64] Although no storage facilities have yet been found, fragments of pithoi are abundant at *Bamboula*,[65] indicating that a significant part of its function was for storage. Explorations around the mouth of the Kouris at the sea may reveal harbour installations.

While little evidence of metal processing has yet been identified on the site, several crucible fragments with a metallic coating and evidence of charring were recovered from the site in the early excavations. Possible evidence of small-scale metallurgical work takes the form of small items, such as tweezers, spearheads, saws, and needles.[66]

Little in the way of monumental architecture has been uncovered as of yet from Episkopi, but in 2001 a piece of ashlar masonry and a pillar were found in a secondary context. Ninety meters of a city wall and a probable city gate have been uncovered.[67]

Prestige goods from the LBA necropolis include gold, ivory, lead, silver, and alabaster, attesting to an elite presence, and a socially stratified population at *Bamboula*. This is also

[61] Walberg 2002.
[62] Benson 1972, pp. 65-104.
[63] Weinburg 1983, p. 4.
[64] Weinburg 1983, pp. 36-40.
[65] Benson 1972, pp. 102-103.
[66] Benson 1972, 125-138.
[67] Walberg 2002.

evidenced by seven cylinder seals and several impressed ceramic fragments.[68] The 2002 excavations have produced more material along a similar vein. One is a Cypriot Bronze Age seal from a tomb context; the second, another relief pithos fragment from a Bronze Age well.[69] Such pithoi fragments are rare, but another exists from a site north of *Bamboula* along the Kouris river valley, Alassa.

Thus, in many ways, Episkopi *Bamboula* seems comparable in terms of its material record to Enkomi. Future work at the site should bring to light more evidence that will enable archaeologists to interpret more accurately the settlement hierarchy for the LC period. In addition, it may it may show how *Bamboula* and the contemporary Bronze Age site of Alassa were related to each another, if indeed they were related. The connection between these two important sites may bring a new perspective to our understanding of the Late Bronze Age Cypriot settlement pattern.

Alassa

Alassa is an important site and will surely have significant ramifications for our understanding of LBA Cypriot settlement patterns. This large settlement is located inland, rather than on the coast, within the foothills on the south side of the Troodos mountains. Excavations in the area were carried out at two locales, *Paliotaverna* and *Pano Mandilaris*. Being no more than 250 m apart, these two contemporary areas are no doubt connected and comprise one settlement. As of 1994, the current excavated area of Alassa was only ca four hectares smaller than the area uncovered in the final excavations of Enkomi.[70]

[68] Benson 1972, pp. 141-147.
[69] Walberg 2002.
[70] Knapp 1997, p. 54.

While LCI material is scarce at Alassa, it does have a limited amount of material dating to this early a period. This material comes primarily from one grave at the site (it contained LCIB ceramics).[71] Most of the finds from Alassa date to LCIIC, and also indicate that the site was abandoned some time in LCIIIA. Undoubtedly further excavation will produce more early material. Other significant finds at Alassa include a bathtub (more likely an industrial device) similar to bathtubs at the Sanctuary of Aphrodite, Maa *Palaeokastro*, and Pyla *Kokkinokremos*. A cross-shaped stone, which has a parallel at Myrtou, may come from an altar. A wall bracket may also be similar to one found at Myrtou.[72]

During the LCII period, the population of Alassa was heavily involved in agricultural activity (attested to primarily by pithoi at the site and a large number of querns and grinders). Metallurgical production is attested to by slag, bellows, and a bronze hoard discovered in the 1991 season.[73] Analysis of the slag indicates that copper was brought from other areas of Cyprus (not just from the surrounding area) to be smelted and processed. High arsenic content in the slag indicates that some of the copper at the site may have come from Pefkos.[74] Alassa is also close to copper producing sites at Gerasa and Aghios Mamas.

The most exceptional feature of Alassa is that it is the furthest inland site displaying ashlar architecture. At *Paliotaverna*, the layout is characterized by extensive walls with ashlar construction (one block is four meters long).[75] The walls appear to constitute at least one large public building, Building II, and possible religious installations. Building II had the remains of slender pillars (three of them) with drafted margins and a hearth room. The identification of religious installations is supported, though not conclusively, by the presence of at least two bull

[71] Hadjisavvas 1996, pp. 173-174.
[72] Hadjisavvas 1994, pp. 111-112.
[73] Hadjisavvas 1994, pp. 112-113.
[74] Hadjisavvas 1994, pp. 113-114.

figurines.[76] While this evidence is inconclusive, there is little doubt of the public nature of Building I. While habitation of the site is dated to the LCI period, the architecture of the site all seems to belong to LCII. This is based on finds of White Slip II and Base Ring II (though these finds were limited).

Pano Mandilaris produced the most evidence of industrial activity. There were pits for pithos storage in the courtyard, pithoi, large plain vessels, some querns, and two haematite cylinder seals.[77] The evidence for metal production was also located at this portion of the site. Here, the bronze hoard was discovered, as well was a bronze axe and bronze handle. More significant finds included a bellows, copper slag, and alloys.[78] At least nine bull figurines, a miniature bronze oxhide ingot, and an incense burner attest to the possible religious character of the buildings.[79] Bull figurines and miniature ingots are common votive items found at Late Bronze Age Cypriot sanctuaries. This is weak evidence on the basis of which to suggest that the site had a primarily religious function. Perhaps, a small shrine was located in this portion of the site.

Additional evidence for local industries comes in the form of seal impressions on pithoi, which have suggested to the excavator that the inhabitants of Alassa produced their own pottery and built houses according to their own unique style of architecture (he cites Building II as evidence).[80]

In addition to ashlar building techniques at *Paliotaverna*, datable to LCII, Alassa shares a number of other architectural features with sites like Maa *Palaeokastro* and Episkopi *Bamboula*. These include floor paving methods at *Pano Mandilaris*, which are known at *Bamboula* (pithoi

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[75] Hadjisavvas 1994, pp. 108-110.
[76] Hadjisavvas 1989, p. 38.
[77] Hadjisavvas 1989, pp. 36-39, 41.
[78] Hadjisavvas 1989, p. 39.

paving and slabs) and Maa (pithoi paving).[81] Building II at *Paliotaverna* also contains a hearth, a feature well-represented at Maa *Palaeokastro*.

An elite presence is also indicated at Alassa. This evidence for social differentiation relies on the following categories of evidence: public buildings and a possible sanctuary; grave goods, in which deposited daggers have been suggested to represent warriors and styli for scribes. In addition, one grave has been interpreted as richer than the other burials. It contained 93 objects, among which were five gold and three bronze objects, and one haematite cylinder seal.[82] A description of these metal objects (not provided in the publication) might help to assess the value of these goods, and answer questions of whether they were common also in other graves, found in burials at other contemporary sites, and whether they were functional or luxury items.

INLAND SITES

Athienou *Bamboulari tis Koukounninas*

Athienou was founded sometime during the transition from MCIII to LCI and remained occupied until late into the LCIII period (it would be reoccupied after a brief gap in settlement in the Iron Age). The site is located on a low hill. Its excavation was hindered in the 1970s by erosion and modern activity (olive cultivation, trial excavation trenches dug in the 1950s).[83] The erosiona and destruction of the site (part of which occurred in antiquity) made an accurate interpretation of the stratigraphy impossible. It is a poorly preserved sanctuary that based on its

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[79] Hadjisavvas 1989, pp. 36-38.
[80] Hadjisavvas 1996. 173-80.
[81] Hadjisavvas 1996, p. 25.
[82] Hadjisavvas 1989, p. 40.
[83] Dothan and Ben-Tor 1983, pp. 3, 139-140.

spatial positioning could be intermediary between the mining districts and Hala Sultan Tekke, Kition, or Enkomi.

Stratum IV dates to the earliest phase of occupation of the site (MCIII/LCI). It is characterized by a small amount of undistinguished pottery and a few pits that may indicate the location of small huts.[84] It is, therefore, impossible to determine the nature and function of the settlement in its first incarnation. Miniature juglets and around 10,000 votive vessels excavated from Stratum III (LCI-LCIII)[85] give evidence for the religious activity that took place at the site.[86] An ivory rhyton was also discovered.[87] The architecture remaining that dates to this period is represented by a small complex of rooms, a white plaster floor, and a courtyard with three pits.

Stratum III is also the phase in which evidence for metallurgical activity was uncovered. Roughly a half-ton of copper ore in the form of nodules and a limited number of copper objects was found amongst the votive objects[88] in excavations at Athienou (but no crucibles or tuyères).[89] There were also a number of pits that may have been connected with metalworking. The connection between the metal finds and sacred objects is used to support theories about the sacred character of the copper industry on Late Bronze Age Cyprus.

In addition, there was potential evidence for substantial storage at the site. This was represented by a building founded in Stratum III that had storage areas with a platform made of small stones that appears to have been occupied by pithoi.[90] Keswani has suggested that olive oil played a major part in the economy of the site.[91] An ivory rhyton and an Egyptian scarab are examples of prestige goods. Seals, cylinder seals, and numerous weights indicate a possible

[84] Webb 1999, p. 21.
[85] Dothan and Bel-Tor 1983, p. 139.
[86] Dothan and Ben-Tor 1983, pp. 14-20, 118-125.
[87] Dothan and Bel-Tor 1983, 123.
[88] Dothan and Bel-Tor 1983, 136-138.
[89] Dothan and Ben-Tor 1983, p. 140.
[90] Dothan and Bel-Tor 1983, p. 140.

administrative presence at the site. This is further suggested by the discovery of the Cypro-Minoan script there.[92]

In sum, due to the problems in interpreting Athienou's stratigraphy, it is difficult to determine just how much of the material just described can be attributed to the LCI period. Further, it is impossible to determine whether the site was already a thriving sanctuary site at that time.

Myrtou *Pigadhes*

Myrtou *Pigadhes* lies west of the Nicosia road, where a valley running down from Myrtou widens onto a small plain. It is the largest LBA site in region except for Ayia Irini. While ceramic finds (White Slip I and Base Ring I) indicate that the site was occupied during LCI, only one small portion of a wall is datable to that period. Since there is little architectural evidence to speak of for the period in question in this study (MCIII/LCI or ProBA1), its nature and function cannot be determined for this period.[93]

Ceramic finds at the site include foreign material such as Mycenaean wares and a red jasper heart amulet with a cartouche of Ramesses II. Cultic material found at Myrtou includes a rhyton, a wheel-made offering stand, two tripods, bull and snake figurines, an altar, and a "half-horned" stone (the latter two have been reconstructed as an altar with Mycenaean horns of consecration).[94] Evidence for administrative and storage function come from five cylinder seals,

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[91] Keswani 1993, p. 78.
[92] Dothan and Bel-Tor 1983, pp. 118-123.
[93] Webb 1999, p. 35.
[94] Webb 1999, pp. 47-51.

a stamp seal, rim and handle fragments with three short inscriptions, and plain white pithos fragments.[95]

Apliki *Karamallos*

Apliki *Karamallos* is located in the valley of Marathasa, along a river that runs down the northern slope of the Troodos into the sea, and is the first LBA site discovered in the mining district of Cyprus. It lies high up on the east bank of the river in the foothills of the Troodos mountain range, and on a well-known copper belt running from Ambelikou and Mavrovouni to Skouriotissa.[96] Many Roman mines were found in the vicinity, masking the activity of the prehistoric population. The site was found on the south slope of the *Karamallos* hill where there is only a little low-grade ore present. Ceramic finds indicate that the occupation of the site lasted from LCIIB to LCIIIA. There was a small amount of Base Ring I ware at the site, giving evidence for possible earlier activity. The main period of occupation was during LCIIC, then Apliki was abandoned ca. LCIIIA.

According to Joan Du Plat Taylor, there was only tentative evidence of metalworking at Apliki at the end of the BA. This evidence included tuyères found in House A and in the pit in trench B, fragments of crucibles, stone hammers and an abundance of slag.[97] Metal objects found at the site include a gold earring, a bronze chisel, drills, a knife blade, and a fragment of sheet bronze. Du Plat Taylor suggests that the tools that were discovered implied that the processes for the preparation of extracted ores were familiar and carried out somewhere in the neighbourhood of the village. No furnace was found at Apliki. More recently, scholars have

[95] Webb 1999, pp. 47-51.
[96] Du Plat Taylor 1952, p. 133.
[97] Du Plat Taylor 1952, pp. 150-153.

referred to the "extensive" evidence of metalworking at Apliki.[98] It would then appear that such statements are at odds with the published material.

The following finds indicate some form of administration at the site: fragments of pottery and a steatite cylinder seal with Cypro-Minoan script.[99] Sealings similar to this type have been found at Episkopi *Bamboula* and Sinda, but also appear on ceramic balls from Enkomi. The design on the seal consists of a bull's head surrounded by straight border and with a cross-shaped element between horns, similar to the design of a seal from a tomb excavated in 2002 at *Bamboula*.[100] While the Cypro-Minoan script seems to appear all over Cyprus, the seal motif suggests a connection to the south coast of Cyprus rather than to Enkomi, where no seal with such a motif has been found.

SUMMARY

In general, the above-summarized evidence does not appear to support the existence of a centralized political authority centered on Enkomi during LCI. Settlement size is the most commonly quoted piece of evidence for determining the dominance of one site over others within a settlement system. The estimates of settlement size on Cyprus are based on either some or all of the following evidence: the extent of excavations, observations of the local geography of a site, published floor plans of excavated sites (especially for those sites located in the northern half of the island), and on surface scatters around sites that fall within intensively and extensively surveyed regions.[101] Sites which are determined to be larger than others on account of these various types of evidence are assumed to play a more dominant role in the settlement hierarchy

[98] Knapp 1997, pp. 59-61.
[99] Du Plat Taylor 1952, p. 163.
[100] Walberg 2002.
[101] Knapp 1997, pp. 54-55.

of the island, and therefore in the LBA economy.[102] This observation seems to be supported by the fact that most of the larger sites on the island are located on the coast and seem to possess the abundance of foreign and prestige goods found in the LBA repertoire.

Traditionally Enkomi is assumed to have been the most dominant site during the LBA. This notion is in part based on an erroneous assumption about its settlement size and also on its early foundation at the end of MCIII.[103] Negbi pointed out that the "sporadic remains of habitation [at Enkomi] in LCI do not provide us with sufficient data in order to estimate the actual nature and size of the settlement before the latest phase of the BA (LCIIC)."[104] Other scholars have also pointed out that observations based on settlement size do not support the existence of a central political/economic authority based around Enkomi.[105] Kition, Kouklia, Maroni *Vournes*, and Hala Sultan Tekke are all assumed to have been larger sites than Enkomi during the LBA period (though all four, like Enkomi, have produced little or no LCI settlement material; see Figure II). Still, the data for these sites may be skewed even further, as Negbi again pointed out: "due to the limited area excavated in most of these sites, essential data regarding their nature and size are frequently missing."[106]

Yet settlement size is not the sole factor relevant to the discussion of investigating administrative hierarchies, settlement size being a "largely continuous variable." According to Colin Renfrew and Paul Bahn, site size (in "absolute terms, or in terms of the distances between major centers") alone can be misleading.[107] This is because the largest settlement within a given settlement hierarchy does not necessarily wield ultimate authority over all of the settlement sites within its vicinity.

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[102] Catling 1962, p. 145.
[103] Knapp 1997, p. 62.
[104] Negbi 1986, pg. 101.
[105] Stech 1982, p. 112; Keswani 1993, pp. 73-75.

In his book, The Archaeology of Rank, Paul Wason discusses settlement size as a factor in observing settlement patterns: "Settlement hierarchies will involve a patterned variation in size and complexity, which would be distinguishable from size variation resulting from factors not directly related to social organization… Also, administrative seats, the physical loci of centralized power, are not always the largest settlements… But while an exact correlation of settlement size, political importance, and economic importance cannot be assumed, their interrelation can to some extent be sorted out through excavation…"[108]

Thus, Keswani has argued based on the evidence presented in this section and on the distribution of comparable large coastal sites that there is no evidence of a settlement hierarchy centered on Enkomi during the LBA.[109] Knapp has attempted to provide an explanation for the apparent non-correlation between Enkomi's size and its presumed dominance:

> "The apparent disparity between Enkomi's 'functional size' (i.e., its range of ashlar masonry, prestige goods and imports, metal goods [including gold], and manufacturing evidence, seals, etc.) and that of other contemporary ProBA 1-2 settlements, and the ongoing legitimization of its preeminent status, may have been reinforced by Enkomi's dominant roles in both ceremonial activities and economic output, particularly the production and distribution of export goods."[110]

This argument is insufficient to show the supreme authority of LCI Enkomi. While it does provide a possible theory for how Enkomi might have been dominant in its region during LCI, it does not provide any tangible evidence that this site was more important than other contemporary coastal sites. Every other large coastal site has been shown to have the same or

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[106] Negbi 1986, pg. 98.
[107] Renfrew and Bahn 1996, p. 195.
[108] Wason 1994, pg. 129.
[109] Keswani 1993, pp. 73-75.

most of the same archaeological features as Enkomi throughout their development: monumental architecture, prestige goods, sanctuaries, metal processing, etc. Rather, the presence of an elite population at Enkomi, the evidence of industrial metallurgical practices, and its debatable, early foundation as a site of significant size, show nothing more than it was an enduring and sometimes wealthy site during the LBA. The fact that people lived there earlier (MCIII/LCI) doesn't mean it was the capital of the island. As the demand for Cypriot exports grew, the inhabitants at this site may have realized its locational potential for participation in trade overseas, or the site may have been reoccupied at the beginning of LCI by a group who had a similar realization.[111]

In view of these statements, the question of the emergent state on Cyprus and the nature of the settlement pattern must include the discussion of factors other than settlement size. Some of the following categories are also commonly cited as evidence in exploring settlement patterns and hierarchies: prestige goods and foreign imports, metallurgical evidence, storage facilities, sacred or religious architecture and artifacts, and monumental or public architecture.

Keswani has pointed out that many "pre-state societies are known to have undergone significant increases in social stratification, sometimes accompanied by 'secondary state formation', in the course of trade relations with more complex, state-organized polities."[112] An important indicator of such a change is the appearance of an elite stratum of society represented primarily by the presence of prestige goods in the mortuary record. Such a presence indicates a display of wealth and, thus, social status (i.e., status is reflected in the amount of time and wealth expended on the treatment of an individual after/in death).

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[110] Knapp 1997, pp. 65-66.
[111] Due to destruction levels apparent in the stratigraphy of the site, the latter may be the more probable case.
[112] Keswani 1996, p. 215.

The existence of such an elite stratum has been explored in the mortuary record of Late Bronze Age Enkomi (as mentioned in the preceding discussion on Enkomi; see also the discussion below). If it can be shown that most of the prestige items on LCI Cyprus existed primarily at coastal or larger settlements, with fewer prestige items funneling down through the hierarchy of sites inland, then it might be supposed that this elite class resided in the coastal centers and dominated the hierarchy of sites on Cyprus while controlling the majority of foreign trade and exports.

Foreign material on Cyprus is seen as an indicator of the island's participation in international trade and export. This suggests that there was a demand for Cypriot products, presumably Cypriot copper, and probably other products such as olive oil (see discussion of storage below). The texts concerning Alashiya mention numerous exports other than copper that may have been exported in return for exotic and prestige goods.

The development of craft specialization in a society is a possible characteristic of a complex society, as is the development of technology (i.e., there is enough time and social organization to allow for the development of specialized professions not associated with subsistence).[113] Gordon Childe long ago connected the idea of craft specialization with the rise of early states in the Middle East.[114] He thought that an increase in the division of labour caused an increase in population density, and thus, according to him, led to the growth of cities as industrial and trade centers. This, Childe suggests, created a population within urban centers that was composed primarily of industrial specialists. Trigger later pointed out that any population growth had to be based on an increase in agricultural production and that the role of craft specialists in

[113] Renfrew and Bahn 1996, p. 206.
[114] Childe 1950, pp. 5-7.

the rise of urbanism was quite small.[115] Steven Rosen in his study of the evidence from Wadi Feiran warned that "intensification of production was not an immediate concomitant of political complexity, as reflected in the rise of cities."[116] While it is only a part of the whole system of hierarchical complexity, craft specialization, nevertheless, "can be seen as a powerful means to promote inequality, by differentiating forms of labour and relative income or by developing dependence of rural populations on central services."[117]

This discussion is important when considering complexity on LBA Cyprus where evidence of metallurgical activity and specialization is found at a number of Cypriot sites. This fact has led scholars to speculate (in light of the Amarna letters) that copper production was the main economic staple of the LBA economy on Cyprus and, thus, to reconstruct a Late Bronze Age government on the island that was primarily focused on the acquisition, processing, and export of copper and manufactured copper/bronze goods.[118] Muhly observed from the smelting techniques employed at Apliki that there was a uniform method for copper processing on Cyprus during the LCI period (through a comparison of slags from different sites).[119] This observation has been used to support the idea that such activities were standardized by a universal, centralizing authority.[120] Judging from the fact, however, that the material from Apliki dates primarily to the LCII period little can be determined about the level of central control over the island's copper resources during LCI period based on this information.

In light of the emphasis in scholarship on the importance of the LBA Cypriot copper industry, the presence or absence of storage facilities at a site is a topic that deserves much

[115] Trigger 1980, pp. 74-75.
[116] Rosen 1997, p. 87.
[117] Tosi 1984, p. 49.
[118] Catling 1962, p. 145; Muhly 1989, p. 302-303; Muhly 1996, p. 47.
[119] Muhly 1989, p. 306.
[120] Muhly 1989, p. 299.

discussion. Some scholars have seen their absence at specific sites as important.[121] For example, Knapp discusses the lack of storage facilities at Enkomi in support of his theory that there was a system of interdependence between sites in that region during the LC period that motivated the movement of raw materials and subsistence goods throughout the settlement system (see Chapter Four).

At the same time, the presence of storage facilities at specific sites (i.e., Maroni *Vournes*, Kalavasos *Aghios Dhimitrios*) are important indicators that discussions of the LBA Cypriot economy may revolve too heavily around the reconstruction of metallurgical activity. The appearance of large, sometimes stamped, pithoi, along with installations for storage at a site, for example, point to the significant role that olive oil played within the LCII Cypriot economy.[122] It is unclear whether this storage occurred solely for subsistence purposes or for the purpose of export.

Large-scale storage facilities and monumental architecture are often seen as evidence in the development of ownership and redistribution in chiefdom-type societies.[123] They are an indication of a centralized authority that "will draw periodically to feed, reward, and thus indirectly control its warriors and the local population."[124] The collection of goods for redistribution would likely take the form of a tax, which in a chiefdom society may take the form of offerings.[125]

It is sometimes said that the close proximity of ritual structures and structures connected with metallurgical activity indicates a religious domination over the production of copper on

[121] Knapp 1997, p. 62.
[122] Keswani 1993, p. 78.
[123] Renfrew 1972, pp. 386-390.
[124] Renfrew and Bahn 1996, p. 205.
[125] Renfrew and Bahn 1996, p. 205.

Cyprus.[126] Keswani has speculated that some form of religious tribute system was in place to operate the redistribution system of LC Cyprus (see Chapter Five).[127] This hypothesis is based primarily on the supposed association of LC sanctuaries with storage and metal working facilities.

Metallurgy may have been a focus of some of the Bronze Age cults in existence at the time. In conjunction with metallurgical evidence excavated at sanctuaries and the presence of miniature ingots, it has been suggested by many scholars (Buchholz, Catling, Knapp 1986) that the miniature ingots found at sites on Cyprus had a ritual/votive function.[128] For example, the Ingot God found in a sanctuary at Enkomi stands on a miniature ingot.[129] These facts have been used to support the religious control asserted over the copper production on Cyprus. As stated in Chapter Two, however, most of this evidence, including the sanctuaries at Enkomi date to a time after LCII.

Sometimes discussed in connection with sanctuaries, but also with architecture of a military or public nature, monumental architecture, including Cypriot Ashlar, is the product of specialized and time-intensive labour. The ability (in terms of professional labour and social organization) and wealth to produce such constructions is a common characteristic of a stratified society with a governing elite. The same can be said for public buildings commonly identified with regional or local government, storage and redistribution. Each and every coastal site on Cyprus during the LBA has some monumental architecture.

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[126] Knapp 1986, 43.
[127] Keswani 1993, p. 79.
[128] Knapp 1986, pp. 25-29, 78.
[129] Knapp 1986, pp. 11-12.

Conclusion

It is an affection for the ancient texts dealing with the LBA kingdom of Alashiya that make many scholars unwilling to accept the limited regional authority of Enkomi during LCI. While Enkomi has produced the largest LCI cultural assemblage so far, this is in part due to the fact that Enkomi is the most extensively excavated LBA site on the entire island. It is important to remember that this material comes primarily from mortuary contexts rather than from the settlement.

This chapter has demonstrated that other sites existed during LCI that rivaled Enkomi's assumed political dominance in terms of both their settlement size and the artifacts found at them. The overall picture of LC settlement patterns based on the excavated evidence suggests that there were multiple points of access to the resources of LBA Cyprus through its several coastal sites. It also suggests some degree of variation within the site typology (i.e., large coastal emporia, agricultural sites, metallurgical sites, etc.). The discrepancy between the wealth and large size of the coastal sites and the more modest wealth and size of the inland sites, thus, provides evidence for the existence of a settlement hierarchy on a regional level, not a strong island-wide settlement hierarchy. The following chapter discusses the contribution of surveys and regional studies to our knowledge of the LC landscape and to the establishment of settlement models that attempt to reconstruct the political organization of Cyprus throughout time.

CHAPTER FOUR

SURVEY ON CYPRUS

While excavated evidence provides some understanding of the site typologies of the early Late Bronze Age on Cyprus, evidence from surveys can help archaeologists to observe settlement patterns in the landscape, to order the typologies into something understandable. While it is known from excavated evidence that there are larger, wealthier sites on the coast, that there are smaller, less wealthy sites inland, survey can clarify how these sites were related to one another, whether or not this observation holds to be universally true for the entire island. If there were some form of centralized administration on Cyprus, then we would expect to find some type of hierarchical organization in the settlement system.[1] Systematic survey can provide data "relating to political, economic and social organizations of cultures as a whole by addressing the topics of political divisions in and economic exploitation of the landscape."[2] Thus, excavation

[1] Flannery 1976, p. 168.
[2] Rupp and Keller 1981, pp. 1-5.

and survey together should provide a more complete picture of the socio-economic or socio-political nature of LCI Cyprus.

THE NECESSITY OF INTENSIVE SURVEY

There is still a great need for systematic survey to be carried out in the Mediterranean. Cyprus itself is a particular case where the need for archaeological survey is very urgent. Owing to the small size of the island and the limited amount of arable land and habitable space, settlements throughout time tended to shift about in relatively small areas. Increasingly intensive agricultural practices, illicit excavation, and the boom in the tourism industry and value of coastal land have all contributed to the hastening of the destruction of archaeological material from all periods of the island's history.[3] Survey then provides an economic and non-destructive means of recovering primary archaeological data from a large area in a shorter amount of time. This data includes ancient boundaries, roads, and the distribution of artifacts on the surface. In addition, it can highlight the problems of trade and communications, spheres of cultural influence and settlement patterns.[4]

In December of 2000, an international conference*, Archaeological Field Survey in Cyprus: Past History, Future Potentials*, was held to review the most up to date work by current and completed projects, to discuss future work, and more importantly to "scrutinize survey methods in order to determine their potential effectiveness in the environment of Cyprus."[5] The conference was designed primarily to support the Department of Antiquities in its role as a cultural protector and to advocate the reestablishment of the Survey Branch of the Department,

[3] In the latter case, note the new high-rise hotel and other buildings that have been built almost right up to the fortification wall at the "archaeological park" of Maa Palaeokastro.
[4] Rupp and Keller 1981, pp. 1-5.
[5] Maria Iacouvou 2001 (email comm.)

"headed by a curator, to maintain a public electronic register of ancient monuments and sites of special scientific interest, provide for their conservation and sustainable development, and ensure their accessibility to the public."[6]

The first systematic survey of Cyprus was begun in 1955 under British Colonial Rule. It was established by the Department of Antiquities of Cyprus (DAC) as a part of the newly founded Cyprus Survey Branch of the Department. Conducted by Hector Catling, the project's goal was to make a complete record of all of the archaeological sites and monuments on the island.[7] This would give the Department the opportunity to stop the destruction of antiquities and ancient sites by development, land reclamation, and illicit digging.[8] It also encouraged legal archaeological investigations (excavations). An increase in illicit digging and in land development altered the agenda of the branch in the 1960s (though it was now the largest of the branches in the Department). Operations at this point took more often the form of rescue excavation of sites.[9] From 1936 to 1976, Cyprus received uneven and sporadic survey coverage over the entirety of the island. These surveys included: Catling's survey in the Kyrenia, a small area around the Khrysokhou drainage in the northeastern corner of the island, a very small area around Paphos, and around a handful of tiny sites on the north and south coasts, and the northern tip of the island. A large portion of the coastal area of the island and a good portion of the flat inland east of the Troodos mountain range had received some form of regular or extensive survey.[10]

Survey of the island continued in a somewhat sporadic nature until the 1974 Turkish invasion put an end to the department's work and became a roadblock in developing an island-

[6] Maria Iacouvou 2001 (email comm.)
[7] Hadjisavvas (forthcoming).
[8] Hadjisavvas (forthcoming).
[9] Hadjisavvas (forthcoming).

wide perspective on ancient landscapes and settlements on Cyprus.[11] Yet survey work on the island has continued at a steady pace in the hands of other DAC projects from 1974 until the present day.

THE FIRST SYSTEMATIC SURVEY OF LBA CYPRUS

It was Hector Catling who gave us the first real picture of prehistoric settlement on Cyprus. Though Catling's survey was diachronic in nature, most of his publications, especially those focusing on landscape and settlement, are devoted to the study of prehistory. The true merit of Catling's extensive survey was that he recognized the importance of having knowledge of the archaeological landscape for cultural management and for research, and therefore in conducting surveys for surveys' sake alone.[12]

To carry out his survey, Catling had divided Cyprus into eleven smaller and more manageable parts to allow for more systematic and intensive survey (following Gjerstad and Diakaios in their early and less systematic surveys). In the end, the work focused on two parts of the island. The first was the area between Dikomo and Morphou, and the coast from Kyrenia and Liveras. The second was the Yialias river valley.[13] The majority of sites identified by the survey were Bronze Age sites.

This project was, however, only the first step in the development of the systematic survey of Cyprus. There were still problems in its practice, as noted by Catling: results were still skewed towards easy-to-find sites, and the most promising areas were the ones investigated,

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[10] Price 1979, p. 54, fig. 11.
[11] Price 1979, p. 54.
[12] Catling 1962, pp. 129-169.
[13] Sevketoglu 2000, p. 14.

leading to an uneven coverage.[14] Still, the island-wide approach of Catling and his contemporaries and the division of the island into different geographical areas were innovative changes in the local practice of survey.[15]

SETTLEMENT PATTERNS ON LBA CYPRUS

Another important aspect of Catling's survey was that it was one of the last projects that had access to the northern portion of the island and, thus, one of the last that was able to take a true island-wide perspective in considering the prehistoric landscape and settlement patterns of Cyprus. As a result, and with few exceptions, for the last quarter of a century our understanding of prehistoric settlement in the northern half of Cyprus remains undeveloped and out-dated. In this light, some of the current generalizations about the settlement patterns of prehistoric Cyprus may be untrustworthy and, in extreme cases, lack basis in fact.

Certain observations concerning the Late Bronze Age period on Cyprus made by Catling and based on his survey results still seem to hold true today. He observed an expansion in the population of the island evidenced by an increase in the number of sites, as well as in settlement size. Catling pointed to a clear distinction between "prosperous industrial and mercantile towns of the coast and the much poorer rural settlements, whose economy was evidently still based almost wholly on agriculture."[16]

In general there appears to have been a more widespread occupation of the island in the LBA although the Troodos remained without settlement. The north coast sites seem to have diminished in importance with the exception of sites such as *Toumba tou Skourou*, north of

[14] Sevketoglu 2000, pp. 14-15.
[15] Sevketoglu 2000, p. 15.
[16] Catling 1962, p. 142.

Morphou, which may have been a site of some great significance.[17] The south coast appears to have developed in this period and to have achieved more significance, with the rise of new sites such as those at Episkopi *Bamboula*, Alassa, and sites along the Vasilikos Valley. There are four times as many sites as in the MC period.[18]

Enkomi is the best known site from the Late Bronze Age on Cyprus as "a result of protracted excavation in its cemeteries and occupation levels, conducted intermittently from the late 19th century… [and is now]… regarded as far and away the most important."[19] It seems that the site occupied a strategic position opposite the Levant and Ugarit. Its presumed importance is also based also on its association with raw copper and bronze work and literacy. Yet, Catling believed that other sites would be discovered that were just as big and important as Enkomi.[20] In support of his suspicions, Catling pointed out that material from the later part of the Middle Cypriot period (MCIII) and from the Late Cypriot I (LCI) period has been observed at Kouklia, Episkopi, Erimi, Maroni, Klavdia, Arpera Chiflick, Hala Sultan Tekke, Pyla, Enkomi, Ayios Sozomenos, Nicosia, Morphou and Dhekelia.[21]

In 1962, Catling summarized the preceding observations in an article on settlement patterns throughout Cyprus in the Bronze Age. Based on the information available to him and collected through his extensive survey of the island, Catling devised a threefold model of settlement hierarchy of sites on Cyprus[22]:

1. rural/agricultural villages depending on agricultural produce and stock rearing, located near great springs or watercourses, i.e., in the Kormatiki peninsula, or the Kyrenia foothills and Karpass and the river valleys of the central plain.

[17] See discussion pp. 23-27.
[18] Catling 1962, p. 142.
[19] Catling 1962, p. 143.
[20] Catling 1962, p. 143.

2. sites that were in close proximity to areas involved in copper mining activities.
3. rich sites of the coast. Catling observed, based on the wealth of imported pottery in tombs, that these sites were so much richer than the other, inland sites "that some other factor in the economy must be deduced."[23]

Catling's model set the framework and context for current discussions concerning settlement patterns at the start of the Late Cypriot Bronze Age. It presumes the supremacy of the copper trade on the island and the island-wide hierarchical nature of all sites.

CURRENT AND RECENT FIELDWORK

Since the political division of the island in 1974, the focus of survey has shifted to the southern portion of Cyprus. In the last quarter of a century, a handful of large foreign survey projects has been established on the island, these in a response primarily to the economic and agricultural pressures discussed above (Figure 3).[24] These new projects cover large geographical areas and aim at being multidisciplinary in nature. One such project is the Larnaka Hinterland Project, conducted by Albert Leonard Jr. (see discussion below). It aims at refining our understanding of the Bronze Age landscape of Cyprus in ecological terms, not only by emphasizing and understanding both the modern and ancient landscape, but also by paying close attention to the topography surrounding prehistoric settlements. In this way, Leonard hopes to illuminate how the different settlements on the southeastern coast of Cyprus interacted with one

[21] Catling 1962, p. 144.
[22] Catling 1962, pp. 144-146.
[23] Catling 1962, p. 145.
[24] Sevketoglu 2000, pp. 18-23.

another.[25] The following is a review and assessment of the major recent surveys on the island that follow and, in some cases, build on Catling's initial work.

Phlamoudhi Survey

The goal of the Phlamoudhi survey (Figure 4) was to investigate the remains surrounding the Vounari hill, an area of about three miles by three and a quarter miles. A third of the hill itself was occupied by the remains of a MC/LCI sanctuary. It was decided to carry out a systematic survey since preliminary investigations had not uncovered the corresponding LBA settlement.[26] The project, nevertheless, was diachronic in nature and focused on material from the Neolithic to the Late Byzantine period.

The survey was conducted by teams of four to six individuals who walked about in a group "collecting pottery and visible objects" and "noting the presence of building materials." When possible they recorded the pottery density. The sites were photographed and recorded on topographical land maps (1:2,500 scale) then transferred to maps of 1:25,000 scale. The project also took into account water sources, modern agricultural yield, and made use of geographical maps.[27]

The crew succeeded in relocating almost all of the sites recorded in Catling's site gazetteer for the area. Nevertheless, the lack of description concerning the project's methodology makes any comparison of the survey results to those of another survey quite difficult. There is no record of how intensively the area was covered. In addition, no analysis of the material has ever appeared to clarify any site typologies or settlement patterns that may have been apparent in the surface material.

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[25] Leonard 2000, p. 133.
[26] Symeonoglou 1972, p. 187.

Khrysokhou Survey

In 1972, this project (Figure 5) surveyed extensively both banks of the Khrysokhou drainage on the northwestern tip of Cyprus (completed in 1974). The goal was to attempt to conduct a multi-period survey in a relatively confined/remote geographical area with the aim of extrapolating observations on more general settlement patterns from the collected data. Another objective was the collection and study of Neolithic stone artifacts.[28] Two hundred and thirty-three sites were identified in the field and recorded patterns of settlement in the long durée. The information collected concerning each site included elevation and proximity to water sources. Essential information, such as the project's methodology for field walking, site identification, and artifact collection, are not described. It is impossible then to know in what fashion the area was surveyed.[29]

Artifact collection was described in publication as "extensive." This material suggested to the project directors that most sites in each period were "multi-component" in nature. This was determined on the basis of diagnostic ceramics, which were deemed "sufficient to identify a 'component' at any given site."[30] Seven hundred and six components were identified for the two hundred and twenty-three sites. In publication, the material collected and sites identified were broken down into chronological divisions- prehistoric to modern. This data was coded for computer analysis, which "treated all components of all sites as discrete representatives of temporal settlement patterns." Each was analyzed "relative to horizontal distribution, elevation, and proximity to aquifers or other potential sources of water." The resulting patterns were then

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[27] Symeonoglou 1972, pp. 187-190.
[28] Adovasio et al. 1978, p. 42.
[29] Adovasio et al. 1978, pp. 42-44.
[30] Adovasio et al. 1978, pp. 42-44.

contour mapped according to three occupational zones determined by elevation and corresponding to natural topographical features: Zone 1 (0-150 m), Zone 2 (150-300 m), Zone 3 (300 m and above).[31]

Late Bronze Age sites were located, after a Middle Bronze Age hiatus in occupation, in both the lowlands and Zone 3 (while Early Bronze Age sites appeared to have been primarily in the lowlands). One such LBA site was a "substantial fortified settlement."[32] Arable land in the project area is scarce, but water is abundant. It has been suggested that there was defensive potential in the choice to settle in the uplands. The project director noted that "upland as well as lowland Late Bronze Age sites in the Khrysokhou drainage represent divergences from the Late Bronze pattern on the rest of the island" as they are clustered in the interior rather than being located on the coast.[33]

While no raw data and no final publication have ever appeared, the project demonstrated overall that the availability of water was one of the primary considerations for the siting of settlements in the area. The project directors tied the continuity of settlement in the area from prehistoric to present times to the constant water supply. A preference for siting settlements at low elevations was also demonstrated. Two shortcomings of the publication are that all Bronze Age sites (from Early to Late) are depicted together on the publication's computer generated map. There is, thus, no representation of all of the sub-periods of the Bronze Age. As well, there is no listing or gazetteer of each individual site with its locational description or its collected artifacts. Catling's observations about more general settlement trends for the island were not put to the test (i.e., in terms of site typologies and hierarchies). Therefore, we are provided with very generalized conclusions without a detailed description of the evidence.

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[31] Adovasio et al. 1978, p. 44.
[32] Adovasio et al. 1978. P. 47.

Analiondas Regional Survey

Stanley Price's final publication for this project has become the standard reference book for any survey carried out on the island. The aim of this project was to put together a gazetteer of sites from 6500-3000 BC and so chronologically has nothing to do with the present study. The project's final report was compiled based on existing reports, "archival and map research" at the DAC, and fieldwork in unsurveyed areas. Areas were surveyed on a random sample design based on 5 km squares (Figure 6).[34]

Sites recorded in the gazetteer included Cadastral and other map references, elevation, references to publications, and artifact descriptions (type, quantity, and distribution). Collection methods varied. If material was sparse, the collection was total; if plentiful, then a deliberate non-selective collection method was employed. Sites located by previous surveys were re-recorded and compiled in the gazetteer. Finally, all of the sites included in the gazetteer were analyzed to make observations about Neolithic settlement patterns on the island.[35]

While this project had a narrow chronological view, it identified certain universal problems with survey on Cyprus and emphasized the importance of intensive systematic survey for recording sites that were likely to be destroyed by land development and agricultural activity. The director of the survey theorized that the lack of results in some surveyed areas might have been the result of the latter practices.

Kyrenia Survey

The Kyrenia survey was conducted in 1973 in conjunction with the excavation of a Neolithic site, Ayios Epiktitos *Vrysi*. Its goal was to locate previously recognized sites in the area

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[33] Adovasio et al. 1978, p. 54.
[34] Stanley Price 1981, p. 321.

and to resurvey the Vasilia *Kormakiti* region. The survey was conducted by a field team walking "at the same pace and in the same direction" spread out at regular intervals "within field boundaries." Finds were collected in paper bags on which their locality and the plot identification number from Cadastral Survey maps were recorded.[36] This project was abandoned in its fifth season due to the political turmoil of 1974. Study of the finds was never completed.

Paphos Survey

In 1975, the archaeological integrity of the Paphos district was threatened by a land consolidation program. Sophocles Hadjisavvas conducted a diachronic survey in two areas of the region (Figure 7).[37] The first target was the area around Khlorakas, Lemba, Kissonerga, the second around Souskiou, just three miles north of the former. Hadjisavvas said that other areas in the vicinity were also surveyed, but less systematically due to the fact that the project was not initiated during a season suitable to fieldwork (during April and June).[38] The field crew was composed of three people and the project's methodology remains unrecorded. It is, therefore, unclear how intensively or systematically the area was surveyed.

Thirty-three sites from the prehistoric to the Medieval period were recorded. The single publication from the project records each of these with a brief description of location, surface finds, and Cadastral map numbers. No analysis accompanied or followed the publication. Only one mention was made concerning settlement patterns. Around Souskiou the areas that were richest in archaeological material from all periods up to Medieval times were found at an

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[35] Stanley Price 1981, p. 321.
[36] Peltenburg 1985, pp. 92-114.
[37] Hadjisavvas 1977, p. 222.
[38] Hadjisavvas 1977, p. 224.

elevation of 150 to 180 m above sea level.[39] Most of these were found in an area close to the Dhiarrizos river and Vathyrkakas stream. This seems to substantiate the observation made by other survey projects that water played a significant role in siting a settlement.

No discussion of the single Late Cypriot settlement found and its corresponding cemetery is presented, nor is any description included that might hint at their chronological significance (i.e., which phase(s) of the LC period do they belong to?).[40] The full potential of the archaeological material in this area was not exploited, but some of the same area would be surveyed by the CPSP (see below).

Vasilikos Valley Project

Begun in 1976 and continuing today, the aim of the Vasilikos Valley Project (VVP) was to reveal by survey, excavation, and specialist studies a complete record of life in various prehistoric phases of the valley (Figure 8).[41] This record includes ceramics, lithics, environmental data, flora, fauna, and ethnography. The project's survey was also designed to study settlement systems from the Neolithic to the Medieval period. Originally, VVP made use of a non-random sampling method, but with the growing awareness of archaeologists of the shortcomings of non-systematic survey, by 1979 the project had switched to a more systematic methodology.[42]

The extensive systematic survey of the valley from the Troodos foothills to the coast was carried out by laying 100 m wide transects east-west across the valley at 500 m intervals (i.e.

[39] Hadjissavas 1977, p. 228.
[40] Hadhissavas 1977, p. 230.
[41] Hordynsky and Johnson 1981, p. 331.
[42] Hordynsky and Johnson 1981, p. 331.

roughly perpendicular to the course of the valley).[43] This was to ensure that sufficient attention was paid to the smaller side drainages, the hill slope, and the low river terraces around the major drainage. The crew consisted of two to four surveyors spaced 10 to 50 m apart. In addition, intensive survey was sometimes carried out in order to define site boundaries. Such work was based on 10 m quadrats and carried out by eight people. For example, the area around the Neolithic site of Kalavasos *Tenta* was surveyed intensively in order to determine the site's size and to assist in placing excavation trenches.

Several significant observations concerning Cypriot prehistoric archaeology were made by the project. No LBA sherds were identified in the mining area to the northwest of the valley.[44] Evidence for metallurgy in the settlement system of the valley continues to be elusive. As well, excavations have suggested that the data derived from the surface survey of the area may be misleading. The large LCII site of Kalavasos *Aghios Dhimitrios* was represented by a scatter of MBA sherds and a surprising lack of LC sherds.[45] In fact, while the VVP directors have indicated that there is burial evidence for LCI and II in the area, none exists for any contemporary settlements (except for *Aghios Dhimitrios* and Maroni *Vournes*, both LCII sites, though they do not appear to have any domestic function).

Analysis of the survey data, and the raw survey data itself, remains unpublished. Until such a time when this material becomes available, the significance of this project to the understanding of the LC settlement system cannot be evaluated.

[43] Todd 1989, p. 41.
[44] Todd 1989, p. 49.

Sotira-Khaminoudhia Survey and Episkopi Regional Archaeological Survey

In 1979, this project covered an 85 square km area bounded by the Kouris and Evdhimou valleys from Erimi and Anoyira to the sea (Figure 9). It was carried out in four weeks and conducted by six people walking four metres apart in "potentially rewarding" areas.[46] Each was trained to be familiar with both Early and Middle Cypriot artifacts, but oddly not with Late Cypriot material. The methodology of the project was described by Stuart Swiny as non-systematic and extensive with stress placed on the methodological recording of site location, archaeological features, collection of representative artifacts, and mapping site boundaries.[47] "Potentially rewarding areas" were defined as "localities close to a perennial water source and arable land." Such areas were considered "potentially rewarding" for the discovery of LC settlements based on Swiny's observation that a site's proximity to a water source was one of the primary criteria for establishing a settlement during the Early Cypriot period.[48] As well, the project's criteria arbitrarily defined a cemetery as one or more dromoi, while a settlement was defined as an observable cluster of artifacts, ceramic or lithic, covering 100 square metres.[49] All sherds and small artifacts were collected and all architectural features recorded. In addition to field walking promising locations, the project also focused on relocating sites recorded in Catling's publication, and investigated potential sites reported by members of the DAC and local residents.

According to Swiny, his non-systematic survey methodology provided an adequate degree of site recovery because most sites found in the project area either due to development or

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[45] Todd 1989, p. 49.
[46] Swiny 1981, pp. 55-57.
[47] Swiny 1981, pp. 55-57.
[48] Swiny 1981, pp. 55-57.
[49] Swiny 1981, pp. 55-57.

to construction had been and would be reported by locals or located on maps.[50] In addition, he felt that sufficient site recovery/discovery could be achieved by visiting locations assumed to be promising for siting LBA settlements. Yet this cannot compensate for one of the shortcomings mentioned in Catling'survey publication: namely, that sites may exist in areas that seem unpromising or unattractive according to the assumed agenda by which the LBA inhabitants of Cyprus made their choice for settlement locations. Not to mention, not all sites discovered by locals go reported to the DAC, especially if the site is located in an area slated for development or is located on someone's agricultural property. Thus, it does not seem that such methodology would result in the recover of the majority of ancient settlements in the Episkopi region.

In publication, some analysis of the survey data concerned settlement patterning. Most observations pertained to the pattern of EC and MC settlements. One site at Episkopi *Phinijin*, discovered in a 1964 air raid trench, was tentatively identified as a LCI farmstead.[51] This site was originally investigated by Vassos Karageorghis, and revisited by Swiny. At the time of Karageorghis' visit, ancient architecture appeared in the trench two metres below the surface. The structure was mudbrick and was accompanied by a Red-Polished punctured ware bowl. Swiny believed it to be what he called "a simple unit" and therefore possibly a farm as the site was located in a currently arable location 1250 m away from the Kouris river (although the trench was filled in at the time of his visit). He also believed that the unit possibly served what he termed a "large LCIA settlement" at Episkopi *Phaneromeni*.[52] Swiny's excavation reports concerning *Phaneromeni* only discuss MC material from the site.

[50] Swiny 1981, pp. 55-57.
[51] Swiny 1981, p. 61.

Akhera Survey

This area is four km south of Meniko and 70 km southwest of Nicosia. The purpose of the Akhera survey was to locate all ancient sites in an area of 10 square km, with a special focus on mining activity and trade routes, and on clarifying the circumstances of the end of the LBA on Cyprus. Each square km was divided into 500 m quadrats and walked in "as may passes as necessary" to cover the area "thoroughly." The project located no sites contemporary to Akhera in the area and noted a lack of natural resources in the region.[53]

Canadian Palaepaphos Survey Project (CPSP)

The CPSP (initiated in 1979) is one of the only completed survey projects carried out on Cyprus that has seen any semblance of a final publication. It focused on a 665 square kilometer area around Kouklia *Palaeopaphos* (Figure 10). The preliminary reports from the survey took great pains to detail the survey methodology employed.[54] This represents the emphasis of current survey projects on Cyprus on carrying out their agendas in a more scientifically oriented fashion (in methodology, statistical analysis, and specialist studies) and on correcting the shortcomings of early surveys on the island.

The CPSP employed an extensive survey methodology, based on a stratified random sampling strategy. In the first season it covered non-random areas specifically chosen according to their proximity to water sources, prominent landforms, and arable land (much like the VVP conducted in the same year).[55] By the second season, they had switched to a random sampling method (again much like the methodological history of the VVP) in three different elevational

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[52] Swiny 1981, p. 61.
[53] Wallace 1982, pp. 237-242.
[54] Rupp 1986, pp. 29-32.
[55] Rupp 1981, pp. 323-324.

zones. Later, the aims of the project were changed to address very specific questions about settlement and resource exploitation.[56]

In the extensive survey, teams consisting of five people walked quadrats of one square kilometer within a limited time frame of about five to seven hours. Each crew member typically walked two 100m transects (running east-west or north-south) in each quadrat. Representative archaeological samples were picked up (5-25 sherds or lithic artifacts) within the time allotted for each area.[57] The project ended in 1986 but was re-established in 1991 for further investigations, and again in 1992 as the Western Cyprus Project to further examine prehistoric material (another nine km were surveyed in 1991 and 1992).

Concerns were raised that the change in the project's sampling methodology may have produced uneven results in the different areas within the project's boundaries.[58] The project directors have countered such criticisms by pointing out that resurvey of areas from the 1979 season using the random sampling strategy implemented in later seasons has verified the early results.[59]

Sixteen areas that seem certain to be LBA sites were found.[60] Only one of these was located in the metalliferous zone; but it displayed no evidence of metallurgical activity.[61] While specialist studies from the project have been published (including both lithics and ceramics), a promised publication examining the prehistoric settlement patterns in the area has never appeared. Until such a time when a final publication appears, the relevance of the survey data from the CPSP remains to be seen.

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[56] Rupp 1986, pp. 27-28.
[57] Rupp 1986, pp. 29-31.
[58] Sevketoglu 2000, pp. 21-22.
[59] Sorensen 1989, pp. 185-186.

The Australian Cyprus Expedition (ACE) and the Marki Regional Survey

ACE is responsible primarily for the excavation of the major EC-MC settlement of Marki-Alonia in the northeastern foothills of the Troodos mountains on the southern bank of the Alykos river (Figure 11.1). In 1990, however, a regional survey was carried out in the vicinity of the site and along the Alykos river to place the excavations in "an environmental and culture-historical context."[62] Bronze Age material has long been known in the area and along the river, yet no sites have ever been discovered between the area immediately around Marki and the settlements and cemeteries near Ayios Sozomenos. One of the goals of the project was to determine if this was an accident based on past survey strategies or if it is representative of the actual BA settlement pattern.[63]

The "intensive, non-judgemental" survey in the Alykos valley was carried out in three weeks "around Marki as far as the outskirts of Kotsiatis village to the south-east and Analiondas village south-west up the Alykos river." Rugged terrain prevented the crew from keeping a tight formation and each person walked independently "within one hundred metres of one another, criss-crossing more open fields, along watercourses and up barren hillslopes and scarps."[64]

Sites discovered were recorded and published in a gazetteer with map references and a brief description and analysis of each site. One very important LBA site was located in this fashion, Analiondas *Palioklichia* (Figure 11.2). It consisted of a "50 by 50 m concentration of material" that included "numerous Late Cypriot pithoi fragments," querns, and a single pithos

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[60] Bilde 1993, pp. 6-7.
[61] Rupp et al. 1986, pp. 34.
[62] Frankel and Webb 1995, p. 118.
[63] Frankel and Webb 1995, p. 120.
[64] Frankel and Webb 1995, p. 120.

fragment with a seal impression. This suggested to the project directors a function of "special-purpose processing and storage."[65]

The description of this project's methodology in publication is rather vague. This makes comparison to the results of other surveys somewhat difficult. A future and more thorough publication of this survey's results is required in order to judge the value of the date obtained.

Maroni Valley Project

This project had two components (Figure 3). The first was an "intensive pedestrian" survey designed to provide a representative sample of the settlement system in the lower Maroni valley. The second was an extensive survey covering the entirety of the lower valley. The project describes its field walking method in the following fashion: four evenly spaced walkers and a team leader make passes over the 50 by 50 m units into which the study area was divided. The analyses of the survey's results are pending. Until such time, comparison cannot be made between the work of this project and others.[66]

Sydney Cyprus Survey Project (SCSP)/Troodos Archaeological and Environmental Survey Project (TAESP)

The SCSP has been working in the northern Troodos foothills of central Cyprus since 1992 and has examined over 65 square km (Figures 12.1 and 12.2). The project has established a systematic, intensive survey methodology. It is also an attempt at a very broad interdisciplinary study. Specialists working with the project include archaeologists, archaeometallurgists, geomorphologists, a geobotanist, historians, ethnographers, historical archaeologists, and GIS

[65] Frankel and Webb 1995, pp. 125-126.
[66] Manning and Cornwell 1992, p. 272.

experts.[67] The purpose is to try to integrate a wide variety of different data to "understand the landscape in all its physical, economic and social aspects, at all periods from Early Prehistory to the present day."[68]

SCSP has a long list of goals to achieve: "1) to determine the location and possible function of sites in a regional context; 2) to examine the project area's resource potential (mineral, geological, agricultural); 3) to consider and, where possible, to reconstruct settlement hierarchies by assessing the number, density and size of sites from each period, and their change through time; 4) to reconstruct the landscape and settlement patterns of an early industrial society; 5) to trace long-term development in regional site patterning, site economies, and the metal industry; 6) to determine the relationship between mining and agricultural sites during several different periods; 7) to examine, through ethnographic fieldwork, the social and economic impact of mining, and its long term relation to other forms of production, especially agriculture; 8) to refine intensive survey practices, particularly with the use of a GIS (Geographical Information Systems) program (MapInfo), and by combining the use of satellite data and imagery with geobotanical exploration in an attempt to predict the location of mining or industrial sites."[69]

TAESP (Figures 12.1 and 13) has much the same agenda as SCSP. Its aim is to combine the results of archaeological survey with a variety of interdisciplinary studies to understand how human settlements and the landscape affected one another.[70] Some of the issues being studied are social organization, settlement patterns and the relationship/network of different sites in the study area, the effect of the environment and of land forms on settlement patterns, how land use

[67] Knapp and Given 1996, pp. 301-303.
[68] www.scsp.arts.gla.ac.uk
[69] Knapp and Given 1996, pp. 296-297.
[70] www.tasp.arts.gla.ac.uk

affects settlement, what we can learn from surviving architecture, and the exploitation of resources (i.e., copper). In addition, the project is exploring how "intensive field survey can be combined with ethnography, documentary history, architectural analysis and oral history to advance our understanding of the interaction between people and their landscapes in recent times."[71]

Preliminary reports[72] from SCSP have focused primarily on methodology and specialist studies (and in some cases excavation). The methodology has been described in a somewhat complicated fashion throughout the reports. Basically, the study area was divided into 100 square meter UTM aligned quadrats.[73] Transects followed the north to south lines that define the UTM grid. These transects were surveyed systematically by teams of four to five people walking five to 12.5 m apart. In addition, during some seasons, a plot recording system, each plot defined as a large easily distinguished area, sharing the same terrain or topography, was used interchangeably with the quadrat recording system. Where possible aerial photographs were used to create these plots (each defined as large, easily distinguished areas, sharing the same terrain or topography).

Information for each quadrat or plot was recorded in a database where the presence of any architectural material and dominant environmental characteristics were also recorded. Ceramic density studies were also conducted with special attention paid to distinguishing the background artifact scatter. Efforts were also made to establish relationships between artifact density and topographic and environmental characteristics of the landscape. Sites were defined as local peaks in artifact density. TAESP, and SCSP in later years, has refrained from the

[71] www.tasp.arts.gla.ac.uk
[72] SCSP provides access to preliminary results and reports on the web. TAESP's results are available primarily on the web. See 'www.scsp.arts.gla.ac.uk' and 'www.tasp.arts.gla.ac.uk', respectively.
[73] Knapp and Given 1996, pp. 297-298.

practice of identifying sites in the field. Rather potential sites are termed Places of Special Interest or 'POSI's.

In general, both projects have produced very positive results, especially for historical periods. The area of the north central Troodos foothills was chosen because the directors felt that this area close to some of Cyprus' most important copper ore sources (and to the Mesaoria) has "more potential than any other on the island for revealing not only industrial and mining sites but also the agricultural villages that supported them."[74] This area was also chosen so that Knapp might test some of the hypotheses concerning the Late Cypriot economy and settlement system that he had made in early publications.[75] In so doing, the project was begun with certain assumptions already in mind concerning the LC settlement hierarchy. These include the following assumptions: that there was an island-wide settlement hierarchy during LCI, that it was similar to that proposed by Catling, and that the LBA Cypriot economy was based on the control and distribution of the island's metal resources.

Larnaka Hinterland Project

In 1997, the Larnaka Hinterland Project (LHP) began the investigation of Larnaka Bay and the area inland along the Treminthos River drainage towards the copper mining areas of Mathiatis at the eastern end of the Troodos mountains (Figure 14).[76] In total, there are three main areas in the hinterland that the study is concerned with: Klavdia *Treminthos*, Arpera *Agios Andronikos*, and the nearby Mathiathis and Sia copper mining areas. A group of four carried out a program of intensive field walking (1997 and 1998) and excavation (1998) in an attempt to

[74] Knapp 1997, p. 42.
[75] Knapp et al. 1992; Knapp and Given 1996, p. 296.
[76] Leonard 2000, p. 117.

understand the "ancient, overland trade in the area."[77] Economic and ecological catchments were the focus of an attempt to understand the modern agricultural potential of the sites of Klavdia and Arpera. Efforts were made to collect specimens of the modern day local flora.

The project has paid close attention to topographical detail as in the following example. In walking sections of the landscape around modern Klavdia, the project relocated the Bronze Age settlement that fits well with Catling's description of Klavdhia *Tremithos*.[78] Topography suggests that this site was an ideal place for the transfer of ores from the inland mines to the coastal sites. Such material would have been transported through a small pass formed by Terminthos river on the east and the rise of Metsavouna to the west. The directors of LHP observed that this would not be the best way to move material to Hala Sultan Tekke and that the metallurgical material was more likely headed for Arpera or another as yet unidentified site to the southwest. When material was moved to Hala Sultan Teke during the Bronze Age, things would more likely have been shipped east of the small pass to avoid a later eastward leg across a deep channel.[79] The project director suggests also that if it were demonstrated that Sia or Mathiathis did indeed ship ores to the coast (to Hala Sultan Tekke or Kition), then it did not pass through Arpera or Klavdia.[80]

The Arpera settlement was also relocated in an area churned up by the digging of a pipeline trench 10 years ago. Some copper slag that had been dug up from a pipeline trench was still visible on the surface. A number of tombs in the area was also located.[81]

In general, the LHP has attempted to show that rather than taking into consideration the natural topography of the land, regional projects place too much significance on the spatial

[77] Leonard 2000, p. 121.
[78] Leonard 2000, pp. 121-122.
[79] Leonard 2000, p. 135.
[80] Leonard 2000, p. 135.

positioning of sites when creating models that attempt to represent the LC settlement system. Based on the analysis of their survey results LHP has provided an alternative model to Catling's general model for the circumstance of the LC Larnaka Hinterland.[82] This alternative model looks at the topographical and ecological features of the area. For the project's purposes, the area was divided into four zones corresponding roughly to fifty meter rises in elevation (from coast to inland), each representing a different topographical niche (Figure 15). This idea is similar to the hierarchical schemes devised by other scholars but rather than relying on site function to determine the hierarchy, it is based on agricultural zones:

> "Zone 1. From Arpera (Agios Andronikos) to the coast (providing agriculture, seasonal herding, and whatever protein resources the sea might offer);
>
> Zone 2. The catchments of Klavdia-*Treminthos* and Arpera-*Agios Andronikos* (mainly agriculture and seasonal herding);
>
> Zone 3. The land further inland toward the mountains, a predominantly bleak, transitional zone (mainly supporting herding);
>
> Zone 4. The upland valleys of the mining area. This area is actually quite fertile and would not seem to need the agricultural products of the middle zone(s). In fact, these valleys are in a very similar situation to the hinterland sites: both possess a substantial agricultural base and overlap with, or abut, areas where herding produces milk, cheese and other forms of animal protein."[83]

Leonard's study represents the extent of the sphere of power of sites in the hinterland through the size of their ecological catchments. Both Klavdia and Arpera were located in rich agricultural areas. Their catchments, however, were quite limited as they began to overlap at ca.

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[81] Leonard 2000, p. 123.
[82] Leonard 2000, p. 133.

2 km. In addition, the analysis of slag samples from Arpera show that it did not rely on either Sia or Mathiathis for its ores. They apparently do not derive from any known source on Cyprus.[84] This indicated to Leonard that they were mining and processing a local ore source as yet undiscovered. Thus, LHP's analysis suggests that each of the four sites mentioned above appears to have been able to sustain itself agriculturally and that they were possibly "more entrepreneurial, since they had two, large market-ports close at hand" (i.e. Hala Sultan Tekk and Kition).[85] In addition, the project directors feel that the natural topography of the hinterland:

> "suggests that there should be a harbour on the coast near Perivolia for which at least the triangular wedge of land around Arpera would have served as a mini-hinterland. A second port, located further to the west to which materials coming down the Pouzis would be directed is also a very definite possibility since the Pouzis river empties into the Mediterranean in a large, crescentic bay. At this stage in our research, the commercial dynamics of the Larnaka Hinterland appear to be different, and much more complex, than the dynamics that have been suggested for other Cypriot valleys."[86]

Thus, the evidence from LHP has brought into question just what the motivation for trade between sites was. Leonard points out: “We have lost much of the evidence for a controlled, vertical commercial (and social?) structure extending from the inland to the coast.”[87] The mining area in the Larnaka hinterland does not seem to have required agricultural support. The intermediary sites do not seem to have relied on the latter for metallurgical resources. The entire economic picture seems to be one that is “loosely structured.”[88]

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[83] Leonard 2000, p. 135.
[84] Leonard 2000, p. 135.
[85] Leonard 2000, p. 135.
[86] Leonard 2000, pp. 135-137.
[87] Leonard 2000, pp. 135.
[88] Leonard 2000, p. 135.

SUMMARY

Intensive survey and regional studies are the most effective way to investigate the socio-political character of a landscape. In the case of LBA Cyprus, however, most surveys conducted offer meager contributions to our understanding of the subject, if they address the subject at all. Many remain unpublished or under-published, existing in the form of preliminary reports rather than final publications. Methodologies are often inadequately described, making the comparison of results from survey to survey near impossible. In addition, while the pursuit of specialist studies in conjunction with conducting intensive survey can be highly useful and informative, in Cypriot archaeological studies they often seem to distract attention away from the more basic application of survey data to the study of settlement patterns and systems. Finally, some surveys, such as SCSP have unflinchingly accepted Catling's proposed settlement hierarchy and have worked to build on and refine it, rather than test it or to look for alternative models. Thus, while intensive surveys have great potential for clarifying questions concerning the socio-economic and socio-political character of Cyprus during the LBA, there are still many shortcomings that must be addressed in the on-going regional studies already in progress there. The data obtained have yet provided no evidence that suggests the existence of a hierarchy that is island-wide; rather, they point to the existence of a number of regionally based polities.

CHAPTER FIVE

SETTLEMENT ON LBA CYPRUS

SETTLEMENT HIERARCHY

Much emphasis has been placed on the apparent hierarchy of sites on the island during the LC period. Catling's original model for site hierarchy is still accepted today though it has been refined from a three- to a four-tiered system by Keswani: primary (coastal sites), secondary (inland sanctuaries), tertiary (agricultural production), and quaternary sites (mining sites).[1] Knapp has basically accepted Keswani's divisions with some slight differences.[2] Both base their interpretations on evidence provided by excavation and survey:

[1] Keswani 1993, pp. 76-79.

KESWANI:	*KNAPP:*
Urban centers	Primary (urban centers)
Inland (sanctuary centers)	Secondary town centers
Agricultural villages	Tertiary sanctuary sites
Mining sites	Peripheral agricultural and mining sites

Primary Centers

Primary centers on Cyprus during LCI are considered 'urban polities.' A polity of this sort engages in specialist activities "like production, administration, markets, social services, and defence- and carries them out in relation to a broader hinterland or as the dominant force in a settlement hierarchy."[3] Traditionally, four such polities are considered to have appeared during LCI: Enkomi, *Toumba tou Skourou*, Hala Sultan Tekke, and Episkopi *Bamboula*.[4] Yet, the picture provided by the evidence from excavations is incomplete. Material representative of the settlements at these four sites during LCI, as seen in Chapter Three, is minimal. In addition, data on the LCI material and LCI settlement architecture from Kouklia have yet to be published in any thorough or useful fashion. Excavations at Maroni *Vournes* have also produced some stratigraphy with LCI activity that remains to be explored and understood comprehensively. In general, the locational preferences of these sites, near the sea and mining regions, appears to have carried on into the LCII period (i.e., at Kalavassos *Aghios Dhimitrios*, Kition, etc.), although in the future even these sites may produce evidence that they were occupied as settlements in LCI. Alassa is an important LCII primary site that will play a useful role in the

[2] Knapp 1997, pp. 48-52.
[3] Knapp 1997, p. 56.

current discussion. Limited LCI material appears at the site, although no pure LCI settlement stratigraphy has yet been discovered.

Primary sites are marked by a "dramatic increase in size" from the MC period, by the quantity of foreign imports and prestige goods found, and the evidence for centralized production found at them at them. Also noted at LCI primary sites is the marked absence so far of the discovery of any large-scale storage facilities. Enkomi, is the best known and models the most traditional example of what should be considered a primary site within the settlement hierarchy. The settlement is located on the coast and is large (the estimated settlement size at its minimum is 16 hectares[5]). From the earliest known times the settlement had a strong association with metallurgical activity and the grave goods from its cemeteries exemplify its wealth (these include items of prestige value).[6] According to Knapp, Enkomi's lack of storage facilities and its supposed dependence on local settlements and mining sites in the Troodos also mark it as a primary center.

Alassa in LCII is a primary site that is a major exception to the rule, for it is not located on the coast but further inland within the foothills of the Troodos mountains along the Kouris river valley, north of Episkopi *Bamboula*. It does, however, show strong associations with both agricultural activities and metallurgical activities.[7] The combined area of the two sites that compose the ancient site of Alassa, *Paliotaverna* and *Mandilaris*, is larger than the estimated size of Enkomi. Most significant about Alassa, and another supposed exception to the rule, is the fact that it is the only inland site in this area (along the Kouris river valley) that has ashlar masonry.[8]

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[4] Negbi 1986.
[5] Knapp 1997, pp. 54-55. See discussion of settlement size in Chapter 3. Estimated settlement sizes are provided in the excavation reports from each site, but the measurements in hectares used in this report are derived from Knapp 1997, pp. 54-55.
[6] Keswani 1996, pp. 221-226.
[7] Hadjisavvas 1994.
[8] This is with the exception of Episkopi *Bamboula*, which has an ashlar block in secondary context. Walberg 2002.

Alassa also has evidence for storage facilities. Kalavassos *Aghios Dhimitrios,* too*,* during LCII is an anomaly to the rule that primary settlements do not have storage facilities, as is Maroni *Vournes*. Both had massive storage facilities. Thus, it seems that storage, at least in southern Cyprus, may not be a function to be identified solely with secondary or tertiary sites in the hierarchy.

Secondary Centers

Inland centers on Cyprus are supposed to have functioned as "nodes where surplus agricultural produce was stored and/or redistributed to mining sites or to urban centres, and through which various forms of semiprocessed copper ores traveled to the coastal refinement and export centres." To Knapp, such centers (e.g., Sinda) were responsible for administration, production and transport. Their purpose was to regulate the flow of copper and exchanged goods, and to minimize the cost of communication and transportation by minimizing the distance between sites. For Keswani, the functions of secondary sites overlapped with those of sanctuaries (which Knapp views as tertiary in the settlement hierarchy).

Sanctuary Sites

Knapp has established the following generalized criteria for defining the sacred landscape of Cyprus. A sanctuary may be defined as having: a distinctive and monumental style architecture, inner sancta, lustral baths, sunken rooms, niches, horns of consecration, altars, platforms, remains of sacrificial victims, repositories, and treasuries.[9] Wright created a precise list of qualifications for the classification of Cypriot sanctuaries in particular. According to him, they are close to agricultural centers and far from large city centers, there are few in the

mountainous regions of the island, they are associated with nature (i.e., a grove), focus on altars, and they have a "servient" nature.[10] Sacred objects found in association with architecture are often understood to show that such installations were sanctuaries, or were associated at least in part with religious activities.

Though they do not conform to all of the above criteria, sanctuary sites on Cyprus are presumed to exist at Ayios Iakovos *Dhima*, Atheniou, and Myrtou *Pigadhes* (amongst others). As noted in Chapter Two, the latter two of these sites are associated with metallurgical production and storage. The evidence for sacred activity at these sites seems to date primarily to the LCII period, though Athienou has provided limited evidence for sacred activity during LCI. According to Keswani, such sanctuaries served as redistribution centers, providing subsistence goods from smaller outlying agricultural sites to the settlements in the mining districts and to the coastal towns. Knapp suggested that the storage function of such sites was limited and that this function was primarily the responsibility of the agricultural centers themselves. He also postulated that while the primary smelting of metal ores occurred at the mines themselves, the metallurgical evidence at Athienou suggests that the further processing of metal ores occurred in the sanctuary settlement.

Peripheral Agricultural and Mining Sites

These sites, according Knapp, were associated with production, storage, and transport functions. 'Agricultural' sites may have supported miners or settlements within the "resource-rich, agriculture-poor mining districts."[11] Grinders and pithoi are considered indicators of such

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[9] Knapp 1997, p. 58 (following Alcock 1993, pp. 172-214).
[10] Wright 1992, pp. 274-276.
[11] Knapp 1997, p. 50.

sites.[12] The ACE located one potential example of an agricultural site during their intensive survey in the northeastern Troodos foothills.[13] The site, Analiondas *Palioklichia*, located in a plow field near the Aloupis River, was represented by over 1000 pithoi fragments and ca. 200 querns, rubbers and grinders. These signify to the directors of ACE that the site was heavily involved in agricultural activity, with grain as a principal commodity. They suggest that *Palioklichia* may have supported mining communities near Mathiati, Sha, and Lythrodondas. A rolled seal impression on a pithos fragment at the site may also have some administrative significance. A second possible candidate for classification as an agricultural site is Aredhiou *Vouppes*, which had a concentration of material similar to that of *Palioklichia*.[14] The site was located by the SCSP near to the mining areas in their study region.

Apliki *Karamallos* is one of the best-known examples of a copper production site. Apliki has rich copper deposits and excavations produced stratified slag from the 13-12th centuries, timber supports in mining galleries that may date to the LBA, sheet bronze, tuyères, crucible fragments, and stone hammers.[15] Fifteen large pithoi on stone bases with six remaining in situ in Area A (while area B, lacking any evidence of industrial activity appears to have been domestic) were also discovered at the site. Politiko *Phorades* is also a mining area located along the Aloupis river drainage.[16] Identified during the SCSP survey, excavation recovered White Slip sherds from a stratigraphical context dating the activity at the site to the LBA. One White Slip sherd was found in conjunction with a furnace that was preserved in a stream bank.

Sanidha is another site that can be viewed as having primarily a production function. This site was located during survey and excavated by the VVP. Thousands of LCII White Slip sherds

[12] Knapp 1997, p. 59.
[13] Webb and Frankel 1994, pp. 5-26.
[14] Knapp 1997, p. 59.
[15] Du Plat Taylor 1952, pp. 133-167.

were located. Some of these were unslipped and deformed, indicating that ceramic production occurred at the site. Other survey and excavated evidence included a processed clay material suspected to derive from "bricks" which may have composed kilns or ovens at the site (as they were all highly burnt). Courtois, in 1970, identified this area as a potential source for White Slip clays.[17]

PROPOSED SETTLEMENT SYSTEM (STAPLE AND WEALTH FINANCE)

The questions that arise from previous sections and chapters in this study are what prompted the development of this settlement pattern? How did the economy of Late Bronze Age Cyprus function? It is the general consensus of scholars, based on the evidence for metallurgical activity at the majority of LBA sites and on the textual evidence, that the growing foreign demand for Cypriot copper was the primary mover in creating a higher degree of social complexity in Cypriot society. This demand would have pressured the Cypriots to produce, and presumably provided the opportunity for an innovative and ambitious elite to move in to meet this demand and profit from it (a fact evident in the wealthy graves and prestige goods of the coastal sites).[18] That is to say, the sudden change in the arrangement of the Cypriot economy and political system at the beginning of the LBA was prompted by an external pressure from contemporary civilizations. Knapp has proposed that this increasing external pressure on Cyprus for its metallurgical resources caused its spontaneous evolution into a state as a single political entity. Yet, the appearance of towns, an elite stratum of society, and involvement in international trade came much later to Cyprus than it did to surrounding regions (i.e., Syria, Egypt),[19] and

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[16] Knapp, Johnson, Held, and Zangger 1992, pp. 319-336; Knapp, Johnson, Held and Keswani 1994, pp. 329-343.
[17] Courtois 1970, p. 83.
[18] Keswani 1996, pp. 219-220.
[19] Keswani 1996, p. 218.

came at their prompting. Thus, the sudden appearance of urbanization on LBA Cyprus has also been described as a process of 'secondary state formation.'[20]

As opposed to 'secondary' states, 'pristine' or 'primary' states arise "without substantial interference from older and more complex societies" (e.g., Egypt).[21] These are often described as evolving out of a 'chiefdom to state model.' 'Chiefdoms' are hierarchical societies, often with no more than two tiers of society where authority is based on kinship ties.[22] In 'states' authority has moved beyond the legitimization of kinship ties, where society is more complex and specialized than that found in chiefdom societies (i.e., more tiers in the social hierarchy).[23] Chiefdom-type societies are often considered a prerequisite for state-societies.[24] For the purposes of this study in which we are primarily concerned with the social and political organization of Cyprus, a general concept of the state as defined by Jonathan Haas is appropriate. He viewed a state as a type of society "in which there is a centralized and specialized institution of government."[25] While 'pristine' and 'secondary' processes of state evolution may have a similar end result, each requires a different explanatory model.[26] 'Secondary' states tend to rise either from the disintegration of primary states or through "conquest, colonialism, or trade with older states."[27] The chiefdom-state model is considered less appropriate in these formative circumstances,[28] as in the case of Cyprus, which is said to lack any chiefdom stage of society.[29]

It has also been pointed out that LBA Cypriot society displays many heterarchical characteristics. A 'heterarchy' can be described as a system where "each element is either

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[20] Keswani 1989b, p. 50.
[21] Keswani 1996, p. 215; Wright 1977, p. 386.
[22] Flannery 1972, p. 403.
[23] Flannery 1972, pp. 403-404.
[24] Spencer 1990, p. 10.
[25] Haas 1982, p. 3.
[26] Haas 1982, p. 5.
[27] Price 1978, p. 161.
[28] Wright 1977, p. 386; Keswani 1996, p. 215.

unranked relative to other elements or possesses the potential for being ranked in a number of different ways."[30] Keswani has suggested that:

> "the productivity of 'heterarchy' as a theoretical concept will depend in large measure on the effort which researchers make to differentiate and explain the conditions associated with hierarchy versus heterarchy in any of the more specific contexts in which it might be used. That is to say, we need to identify the circumstances which promote political unification and hierarchy versus competitive autonomy among peer polities, administrative centralization versus decentralization…"

In the case of Cyprus, she describes a "heterarchical polity as one having a multiplicity of institutions and elite groups- none of which is clearly paramount- *within* the same urban centre."

Keswani has also proposed that a dual system of wealth and staple finance was in place on Cyprus during the Late Bronze Age.[31] This is a concept borrowed from Terence D'Altroy's and Timothy Earle's study of the Inka political economy. They argued that " the requirements of gross production and the constraints of security and of management costs will lead the state to develop a finance system based on production and circulation of both staple and wealth goods."[32] 'Staple finance' was defined as "obligatory payments in kind to the state of subsistence goods such as grains, livestock, and clothing. The staples form accounting units (a bushel of wheat or a head of sheep) that have established values."[33] These staples are collected by the state as revenue for paying personnel who are employed by the state. 'Wealth finance' is described as "the manufacture and procurement of special products… that are used as a means of payment. These wealth items often have established values with respect to other goods of a similar nature but

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[29] Swiny 1989, p. 28; Keswani 1996, p. 217.
[30] Crumley 1979, p. 144; Keswani 1996, p. 216.
[31] Keswani 1993, pp. 76-79.
[32] D'Altroy and Earle 1985, p. 196.

vary in their convertability into staples."[34] The use of a dual system of wealth and staple finance in the Inka state allowed it to support its "disparate economic requirements" through a mixed strategy of labor taxation, control of staple goods, and production and circulation of wealth goods."[35]

According to a discussion by Knapp, staple finance in LBA Cyprus was concerned with the "collection, storage and redistribution of subsistence and utilitarian goods between secondary and tertiary centers and the outlying agricultural or mining villages" (produce, raw materials, plain-ware pottery, tools).[36] Wealth finance dealt "with the redistribution of portable and convertible prestige goods (finished metals, imported and fine-ware pottery, seals, ceremonial perephrenalia, within the primary/coastal centers or with the movement of exotica between the primary and secondary or tertiary centers (Sinda, Atheniou or Myrtou Pighades), in exchange for raw or semi-processed copper ores."[37] Knapp also pointed out that wealth finance had a "prominent ideological component: the display at inland centers and in the rural sanctuaries of prestige or ceremonial items such as miniature ingots, Aegean style pottery and seals, or specialized vessels for feastings, legitimize the status of local elites, emphasizing links overseas to other power centers. Inland sites also function as points for collection, redistribution of agricultural products and surplus (i.e., support mines)."[38]

According to Keswani, these two systems worked in conjunction to varying degrees in different regions on LBA Cyprus. Staple finance functioned by carrying agricultural and raw resources from the inland sites to the larger settlements on the coast. This system was composed, she says, of agricultural production sites providing a subsistence economy for mining sites and

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[33] D'Altroy and Earle 1985, p. 188.
[34] D'Altroy and Early 1985, p. 188.
[35] D'Altroy and Earle 1985, p. 196.
[36] Knapp 1997, p. 49.

for the larger coastal sites so that the sites with assumed metallurgical function could concentrate their activities on mining itself (especially those mining sites distant from arable land).[39] Sanctuary and agricultural sites were responsible for storing and redistributing agricultural products and for shipping copper in various stages of processing. This staple/subsistence system would be governed by a coastal site (e.g., Enkomi), which itself was engaged in an international market, refining and exporting copper products and importing other items, including items of prestige value. These would be distributed inland in return for subsistence goods: a system of wealth finance. In this scenario, Keswani envisions that copper was moved from inland to coast as some sort of religious tribute, suggesting that they acquired "a strong measure of status and ideological legitimization through the display of ceremonial and prestige goods from the coast."[40]

It has also been observed by Keswani that there are two distinct patterns of urbanization on LBA Cyprus. The first encompasses the sites of *Toumba tou Skourou*, Enkomi, and Hala Sultan Tekke (Figure 16.2). These settlements are sited in ideal positions for taking advantage of foreign trade and are located at some distance from mining communities. They appear to have formed over time by the gradual concentration of people from other communities and regions. This gradual concentration of population is reflected, says Keswani, by the initial "dispersed" rather than "agglomerated" character of domestic structures at Enkomi, and by the multiplicity of the mounds around *Toumba tou Skourou*.[41] She also suggests that the close connection of domestic structures to workshops may represent "hereditary claims to land" and an initial lack of "corporate identity." The multiple ashlar structures and industrial areas at Enkomi and Hala

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[37] Knapp 1997, p. 49.
[38] Knapp 1997, p. 49.
[39] Keswani 1993, pp. 76-79.
[40] Keswani 1993, pp. 76-79.

Sultan Tekke suggest the possibility of competing groups of elites at the end of LCII. None have evidence for large-scale storage facilities.

The second urbanization pattern Keswani observes is that in southeastern and south-central Cyprus, consisting primarily of the sites along the Vasilikos Valley and Alassa (see figure XVI.1).[42] These valleys saw long sequences of habitation prior to the LBA. The subsequent LBA sites located in them were distinguished by their massive storage facilities within their monumental buildings, a fact suggesting direct control over agricultural production.[43] The close proximity of these sites to the mining regions they utilized may also indicate a greater degree of centralization of power in the south than what those in the east enjoyed. Keswani suggests that smaller groups of elites, then, in the south could exercise their authority over the regions resources more easily without as great a degree of competition between elite factions.[44] These sites fit the chiefdom model with less difficulty. Thus, the settlement pattern in LCII south-central Cyprus might be described as more hierarchical, while those of eastern Cyprus might be described as more heterarchical.

It can be seen that there is little evidence to suggest, as some have, that a hierarchical, island-wide administration existed on Cyprus at any time during the LBA. Based on the meager excavation and survey evidence for LCI settlement, our conclusion must be that the economic and political landscape was organized and controlled by regional polities rather than a single centralized government.

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[41] Keswani 1996, p. 236.
[42] Keswani 1996, p. 236.
[43] Keswani 1996, p. 236.
[44] Keswani 1996, p. 237.

CHAPTER SIX

CONCLUSIONS

The purpose of the present study has not been to promote or to reject a connection between Alashiya and Cyprus. The evidence concerning the socio-political character of Cyprus during LCI is ambiguous. This is due to the lack of LCI settlement material as yet recovered by archaeologists. Limited amounts of LCI ceramics appear in surveys or within LCII settlements (i.e., *Aghios Dhimitrios*). At one time, Swiny referred to Episkopi *Phaneromeni* as a LCIA settlement, though in subsequent publications he now refers to it only as a MCIII settlement. Enkomi is said to be a MCIII/LCI settlement in its initial phase. The fort and buildings that comprise this level, however, are barely different from the MCIII forts (i.e., Nitoviklia) in the region. The reason for this lack of material is unclear.

One would think that the paucity of LCI material and the lack of any LCI settlements would be enough to discourage theories concerning the existence an island-wide polity during this period. A single observation concerning LCI Cyprus, however, can be made without doubt.

Survey and excavation data do not yet support the idea that Enkomi was the capital of the island in LCI. *Toumba tou Skourou*, Nitovikla, and Nikolidhes are all comparable in size and/or function to Enkomi during this period. The further discovery and publication of LCI material from other primary sites will likely continue to support this interpretation. The suggestion from the excavations at Maroni *Vournes*, the wealth of LCI material in the valley around Kalavasos, and the LCI domestic buildings at Episkopi, and from other areas on the island is that many of the LCII polities may still prove to have LCI foundations. The excavations at Maroni also suggest that such material is poorly preserved and may be difficult for archaeologists to trace. At any rate, it seems likely that the large regional polities of LCII Cyprus would have appeared in their nuclear states during LCI.

There is also the possibility that these hypotheses concerning the political landscape of LBA Cyprus have been based on the incomplete recovery of the archaeological record. For instance there is the poor preservation of LCI material to be considered at *Vournes* and *Toumba tou Skourou*. It has also been suggested that not all of the coastal centers have yet been discovered so the picture of the entire LBA settlement system may be incomplete.[1]

So far it seems that the LC political landscape must be understood to be composed of a number of regionalized polities. This observation is supported by the hierarchical organization of sites and the discrepancy between the size and wealth of the coastal sites as opposed to that of the inland sites. These coastal sites, however, appear to be comparable in extent and function to one another. The majority of them possess all of the same archaeological features throughout their evolution: imports, prestige goods, and evidence for specialized production.

Thus, since there is no evidence for the political unification of Cyprus during LCI, there are two possibilities to be considered. The first is that Alashiya is not connected with Cyprus at

all. The second is that Alashiya is only a part of Cyprus and the notion that Cyprus was ever politically unified must be dropped.

There is no need to believe that the island would have to have been politically unified to make a connection between Alashiya and Cyprus. It is perfectly plausible that the Near Eastern texts that mention Alashiya were referring to a region of Cyprus. In fact, the area around Alassa on the south coast conforms to our expectations of what we might expect to be Alashiya. If Keswani's observation that this southern area might have been a more politically-centralized region is accurate, then Alassa would occupy an ideal central position in the southern foothills of the Troodos for direct control over the region's copper resources.[2] The Amarna letters date to the LCII period. Perhaps they refer to southern Cyprus, ruled from Alassa, perhaps to a smaller region than that.[3]

An increase in the number of intensive surveys carried out on the island should, in the future, clarify this picture the of LBA Cypriot system and provide greater site recovery from the Cypriot landscape. Though survey results from Cyprus are under-published, intensive survey projects still have the most potential for site recovery and for locating smaller clusters of material essential for understanding the changing landscape of Cyprus throughout its history. Perhaps such survey projects will locate a greater number of the elusive agricultural and mining sites than extensive and non-systematic surveys on the island have done in the past.

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[1] Merillees 1992, pp. 316-317; Leonard 2000, pp. 135-137.
[2] The recent study, which revealed that some of the Alashiya letters from Amarna and Ugarit originated from Cyprus, also suggests somewhere in the south of Cyprus, possibly Kalavasos or Alassa, as the point of origin for the letters (Goren et al. 2003, p. 250).
[3] In 1965, Catling made the observation that a handful of different toponyms were understood to refer to Cyprus, including Alashiya and the Egyptian 'Asy.' He also suggested that these names might refer to different regions within Cyprus. If southern Cyprus were to turn out to be Alashiya, perhaps Asy is somewhere in the north.

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APPENDIX

TRANSLATIONS OF TEXTUAL EVIDENCE FROM EGYPT

THE AMARNA LETTERS PERTAINTING TO ALASHIYA

The following translations are all taken from Moran 1992.

Text 1 (EA 33)

To the king of Egypt, my brother: message of the king of Alashiya, your brother. For me all goes well. For you may all go we[ll]. For you household, your wives, your sons, your horses, your chariots, and in your country, may all go [ve]ry well. [More]over, I have heard [t]hat you are seated on [the th]rone of you father's house. (You said), "[Let us have] transported [back and forth] [gift(s) of p]eace." [I have he]ard the greeting [of] my [brother], and I…[…]…[You wr]ote, "[Have transported to me] 200 (?) of copper," [and I (herewith) have] transported to you …[…]… ten talents [of fine copper]. [The mes]senger [that your father us]ed to se[nd t]o [me] I [let go imedia]tely. So wri[te to me, and] may my [bro]ther not de[lay] my [m]an that… […]… Let him g{o} [imme]diately. [A]nd year by ye[ar] let my messenger go [into your presence], and, on you[r part], year by year, your messenger should come from [your] pre[sence] into my presence. (Moran 1992, pp. 104-105)

Text 2 (EA 34)

Message of the king of Alashiya to the king of Egypt, my brother: be informed that I prosper and my country prospers. And as to your own prosperity, may your prosperity and the prosperity of your household, your sons, your wives, your horses, your chariots, your country be very great. Look, yo{u} are my brother. As to your having written me, "Why did you not send your messenger to me?," the fact is that I had not heard that you were going to perform a sacrifice. Do not ta[k]e this at all seriously. Since I have (now) heard (about it), I herewith send my messenger to you. And behold, I (also) send to you with my messen{g}er 100 talents of copper. Moreover, may your messengers now bring some goods: one ebony bed, gold-(trimmed),…; and a chariot, suhitu, with gold; two horses; two pieces of linen; fifty linen shawls; two linen robes; 14 (beams of) ebony; 77 habannatu-jars that are not available […]…
So an alliance should [be ma]de between the two of us, and my messen{g}ers should go to you and your messengers should come to me. Moreover, why have you not sent me oil and linen? As far as I am [concer]ned, what you yourself request I will give. I herewith send a habannatu-jar [that] is full of 'sweet oil' to be poured on your head, seeing that you have sat down on your royal throne. (Moran 1992, pp. 105-107)

Text 3 (EA 35)

S[ay to the k]ing of Egypt, my brother: [message] of the king of Alashiya, your brother. [F]or me all goes well. For my household, my wives, my sons, my magnates, my horses, my chariots, and in my country, all goes very well. For my brother may all go well. For your household, your wives, your sons, your magnates, your horses, your chariots, and in your country, may all go very well. My brother, I herewith send my messengers with your messenger to Egypt. I herewith

send to you 500 (?) of copper. As my brother's greeting-gift I send it to you. My brother, do not be concerned that the amount of copper is small. Behold, the hand of Nergal is now in my country; he has slain all the men of my country, and there is not a (single) copper worker. So, my brother, do not be concerned. Send your messenger with my messenger immediately, and I will send you whatever copper you, my brother, request. You are my brother. May he send me silver in very great quantities. My brother, give me the very best silver, and then I will send you, my brother, whatever you, my brother, request. Moreover, my brother, give me the ox that my messenger requests, my brother, and send me, my brother, two kukkubu-containers of 'sweet oil,' my brother, and send me one of the experts in vulture augury. Moreover, my brother, men of my country keep speaking with m[e] about my timber that the king of Egypt receives from me. My brother, [give me] the payment due. Moreover, here is the situation: a man from [Alashiya] has died in Egypt, and [his] thing[s] are in your country, though his son and wife are with me. So, my brother, loo[k to] the things of the Alashiya people and hand them over, my brother, to the charge of my messenger. My brother, do not be concerned that your messenger has stayed three years in my country, for the hand of Nergal is in my country and in my own house. There was a young wife of mine that now, my brother, is dead. Send your messenger immediately along with my messenger, with safe passage, and then I will send my brother's greeting-gift to you. Moreover, may my brother send to me in very great quantities the silver that I have asked you for. Send, my brother, the things that I have asked you for. My brother should do quite everything, and then whatever things you say I will do. You have not been put (on the same level) with the king of Hatti or the king of Shankhar. Whatever greeting-gift he (my brother) sends me, I for my part send back to you double. May your messenger come to me as of o[ld, and] may my messenger go to you as of ol[d]. (Moran 1992, pp. 107-109)

Text 4 (EA 36)

This is a very fragmentary text, from the middle of a large tablet, dealing with the exchange of certain products. There are several references to 'making' (mining or smelting ?) copper:

[Now] I am sending (sent ?) to my brother 120 (?) [of cop]per; 70 (?) remain… […]… what I sent you was a little. Now I have looked for (more) [and] I will se{n}d you [as much a]s your heart desires. [And w]hat I ask [yo]u for… send me. (Moran 1992, pp. 109-110)

Text 5 (EA 37)

[Sa]y [t]o the k[in]g [of Egypt], m[y brother]: message [of the king] of Alashiya, your [brot]her. For me all goes well. [F]or my brother may all go well. For his household, for his wives, [f]or his sons, for the horses, his chariots, and in his country, may all go ve{ry} well. [I have he]ard the greeting of my brother. [The gree]ting-gift for my brother is five talents (of copper), five teams of horses. I (herewith) promptly dispatch the messenger of my brother. Now may my brother promptly let my… go; let me inquire about [m] bro[the]r's health, and whatever [yo]u n[ee]d put down on a tablet so I can send (it) to you. Send me pure silver. May my brother dispatch my brother without delay. Pa-x-tum-x-e, ^{m}Ku-ni-e-a, ^{m}E-tel-lu-na may the cit[y] expel, and then may my brother let go… (and) ^{m}[B]e-e[e]l-x-y-x, who[o] with … (Moran 1992, pp. 110-111)

Text 6 (EA 38)

Say to the king of Egypt, my brother: message of the king of Alashiya, your brother. For me all goes well, and for you may all go well. For your household, your chief wives, your sons, your horses, your chariots, among your numerous troops, in your country, among your magnates, may all go very well. Why, my brother, do you say such a thing to me, "Does my brother not know this?" As far as I am concerned, I have done nothing of the sort. Indeed, men of Lukki, year by year, seize villages in my own country. My brother, you say to me, "Men from your country were with them." My brother, I myself do not know that they were with them. If men from my country were (with them), send (them back) and I will act as I see fit. You yourself do not know men from my country. The would not do such a thing. But if men from my country did do this, then you yourself do as you see fit. Now, my brother, since you have not sent me back my messenger, for this tablet it is the king's brother (as messenger). L[et] him write. Your messengers must tell me what I am to do. Furthermore, which ancestors of yours did such a thin{g} to my ancestors? So no, my brother, do not be concerned. (Moran 1992, pp. 111-112)

Text 7 (EA 39)

Say to the king of Egypt, my [brot]her: message of the king of Alashiya, your brother. For me all goes well, and for you may all go well. For your household, your chief wives, your sons, your wives, your chariots, your many horses, and in Egypt, your country, may all go very well. My brother, let my messengers go promptly and safely so that I may hear my brother's greeting. These men are my merchants. My brother, let them go safely and prom[pt]ly. No one making a claim in your name is to approach my merchants or my ship. (Moran 1992, pp. 112)

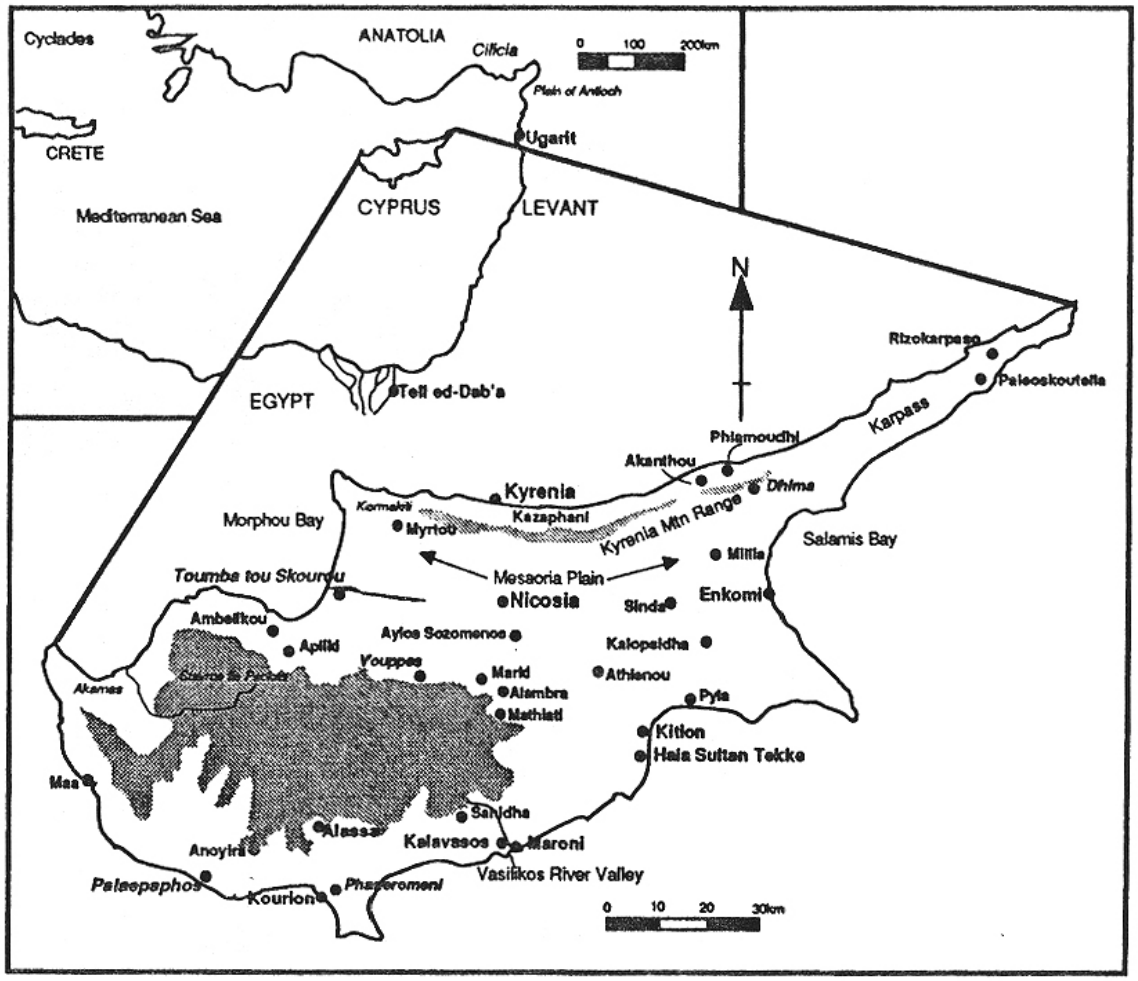
Text 8 (EA 40)

Say [to the go]vernor of Eg[ypt, my brother]: messa[ge of the governor o]f Ala[shiya, your brother]. For…[…] all goes well, and fo[r you] may all go well. My brother, before the ar[rival of Su]mitti, I sent t[o him] nine (?) of copper, two pieces of i[vor]y, one beam for [a ship], but h[e] gave [no]thing to me, and y[ou se]nt (only some) ivor[y], my brother. I herewith send as your greeting-gift five (?) of copper, three talents of fine copper, one piece of ivory, one (beam) of boxwood, one (beam) for a ship. [Mo]reover, my brother, these men [and] this ship belong to the king, my lord. So send [me] (back) the ship [of the king, my lord], promptly and [saf]ely. [And as for y]ou, my brother, [wh]atever y ou ask for according to [your fancy], I will give it to y[ou]. These me are servants of the king, [my] lo[rd], and no one making a claim in your name is to approach them. My brother, send (them back) to me safely and promptly. (Moran 1992, pp. 113)

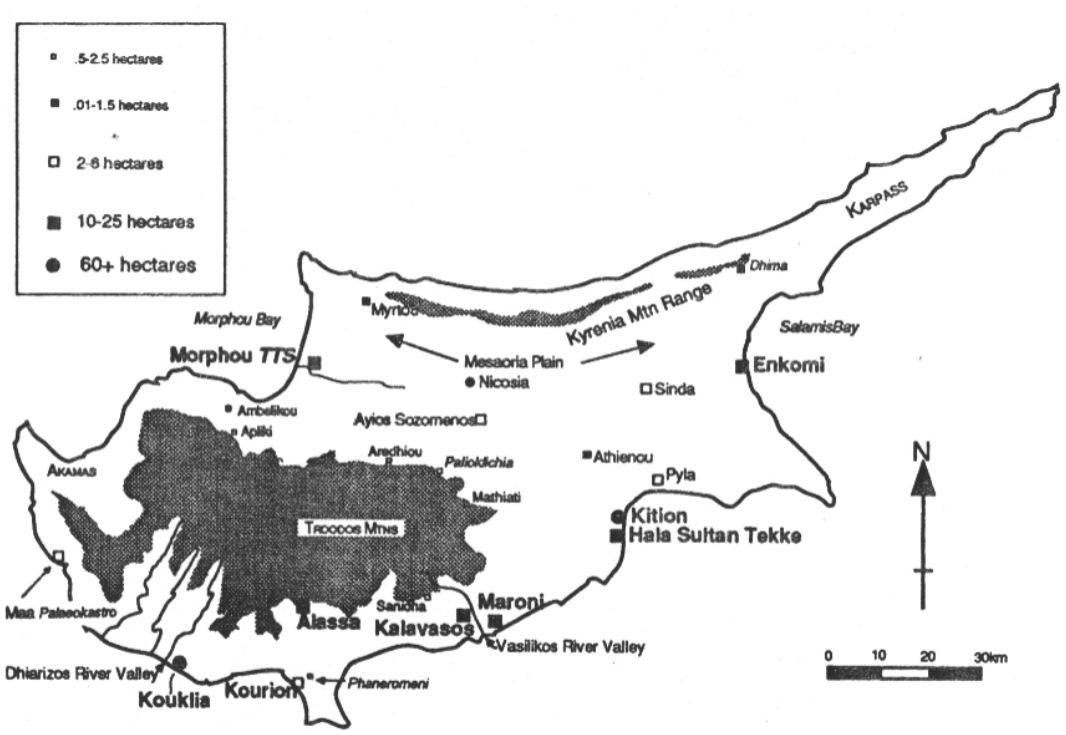
Text 9 (EA 114)

[Rib-Hadda says] to [his] lord, [king of all countries, Great King, King of B]attle: may the La[dy o]f [Gu]bla grant power to the king, my lord. I fall at the feet of my lord, my Sun, seven times and seven times. May the king, my lord, know that Aziru is at war with me. He has seized twelve men of mine, and the ransom price between us he has set at fifty (shekels of) silver. It was the men whom I sent to Sumur that he has seized. In Wahliya are the ships of the rulers of Tyre, Beirut, and Sidon. Everyone in the land of Amurru is at peace with them; I am the enemy. As Yapah-Hadda is now on the side of Aziru against me, he has, I assure you, seized a ship of mine, and he has, I assure you, for this very reason been going to sea to seize my ships. May the king give thought to his city and his servant; my peas{an}try long only to desert. If you are unable to rescue m[e] from my enemies, then send back word so I can know what action I am to take. Look, I (must) keep writing to you like {th}is to you about Sumur. Look, I did go and I strongly urged the troops to [guard i]t, but now they have abandoned it, [and] the garrison [has deserted]. And [for this reason I keep wr]iting. I have sent […] a messenger of mine time and again. How often did I send him and he was unable to get into Sumur! They have blocked all the roads against him. That fellow looks with pleasure on the war against me and against Sumur. For two months he has been encamped against me. For what reason is your loyal servant so treated? For service to you! If you are unable to fetch you[r] servant, then send archers to fetch me. It would be good to be with you. The enemies of the king are at war with me, as are his mayors, to whom he gives thought. For this reason my situation is extremely grave. Look, ask the other Amanmassa if it was not {from} Alashiya that I sent him to you. Give thought to your loyal servant. Pre[vi]ously, my peasantry got provisions from the land of Yarimuta, but now, now Yapah-Hadda does not let them go. W[hy are you negl]igent? [The king must] send a garrison [to protect] yo[ur loya]l [servant…]… the enemies of the king, for they make a mayor who serves you with loyalty prowl about. Moreover, give thought to me. Who will be loyal were I to die? Look, Yapah-Haddah is on the side of Aziru. (Moran 1992, pp. 188-190)

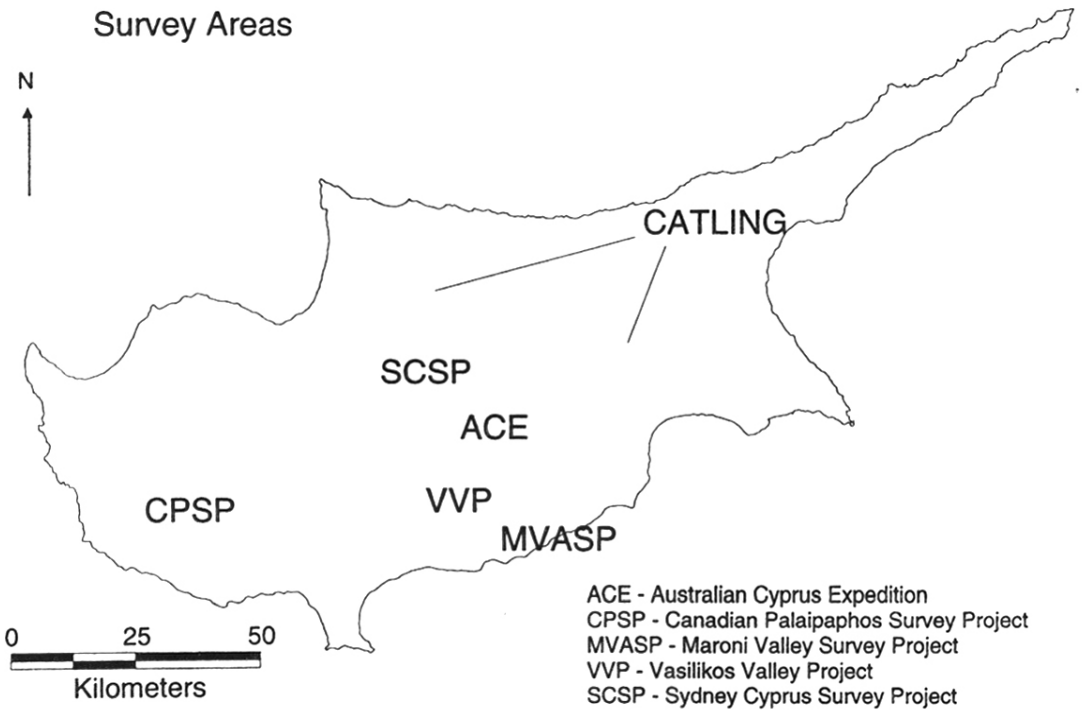
Figures



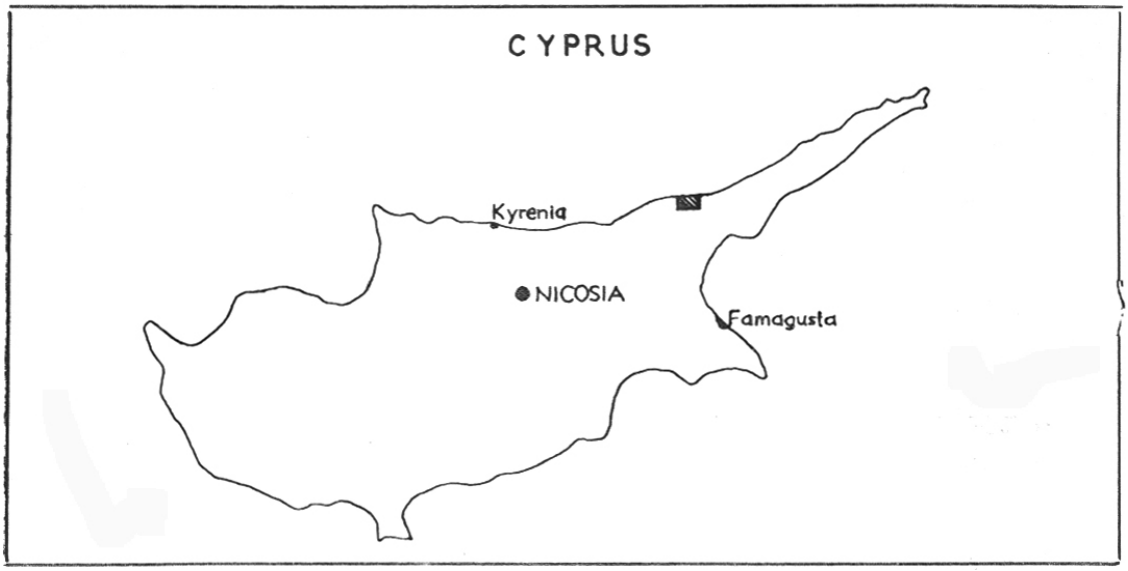
General map of Late Bronze Age Cyprus showing most of the sites mentioned in the text.

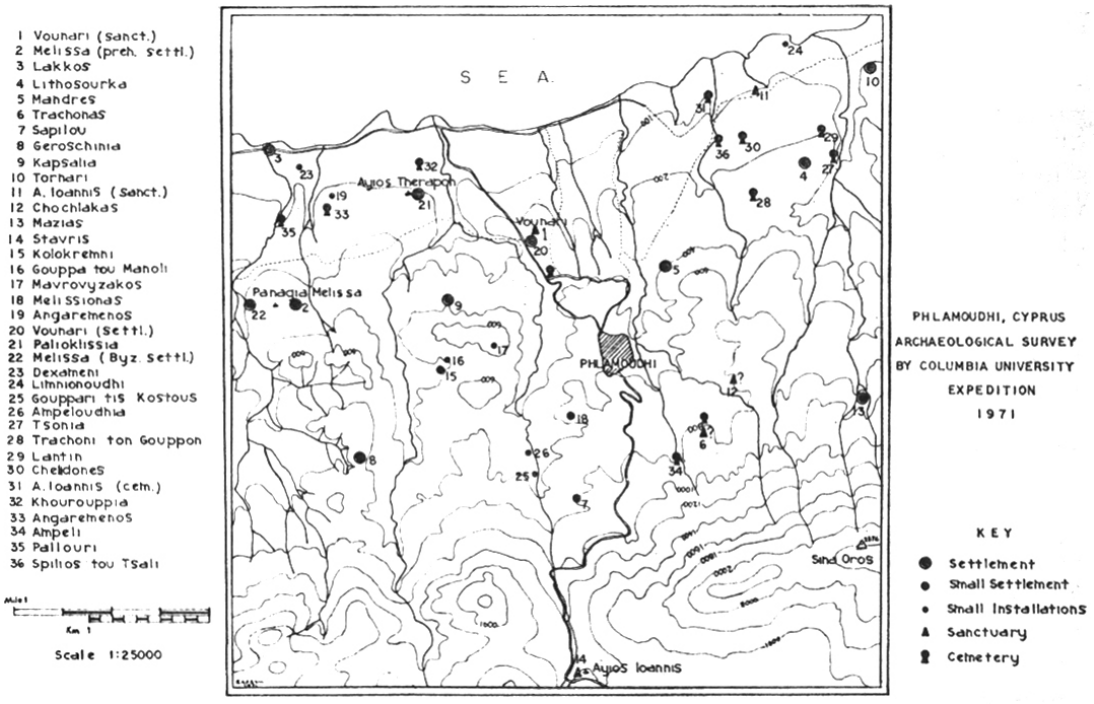


General map showing settlement sizes.

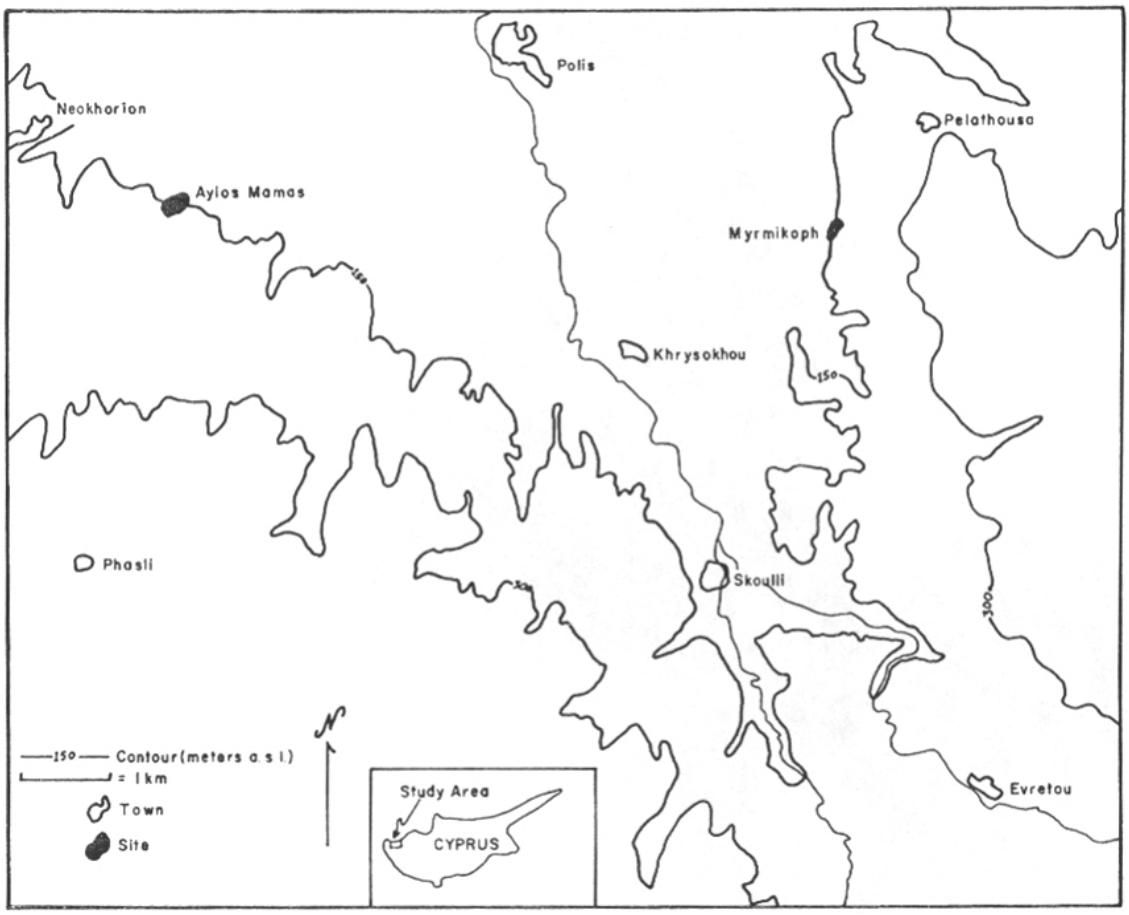


Map showing the locations of recent surveys on Cyprus.

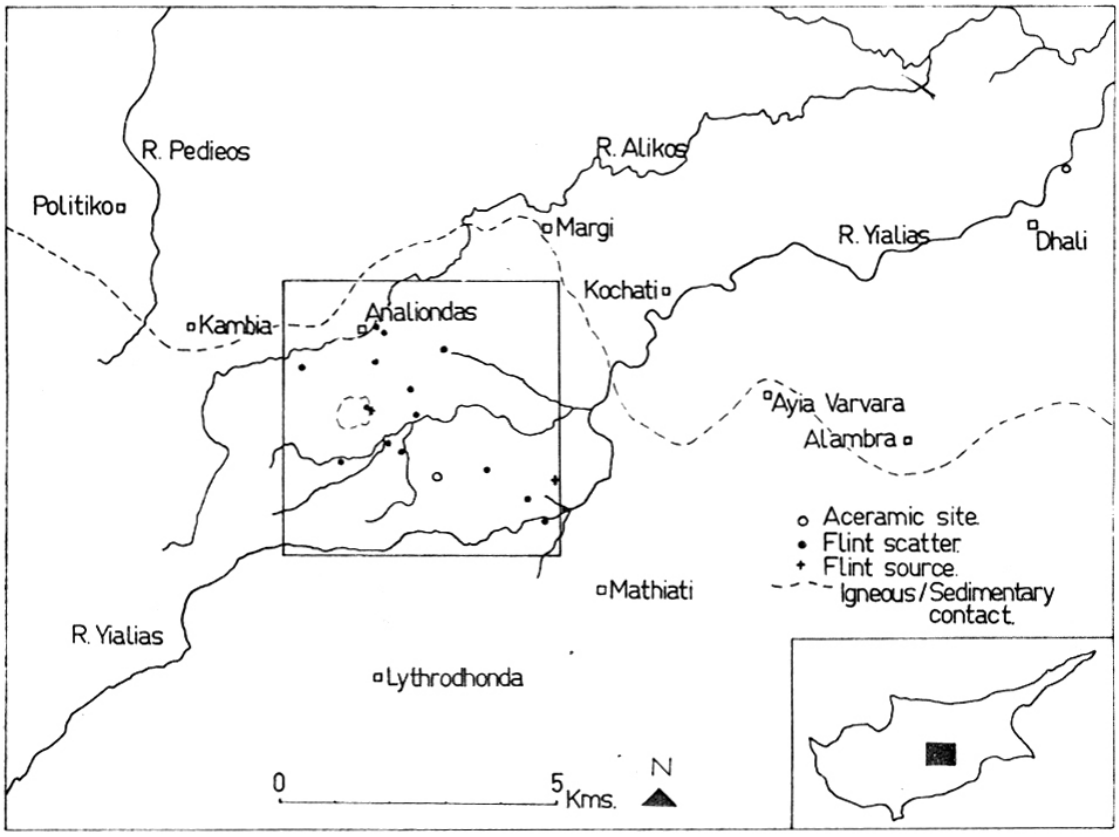




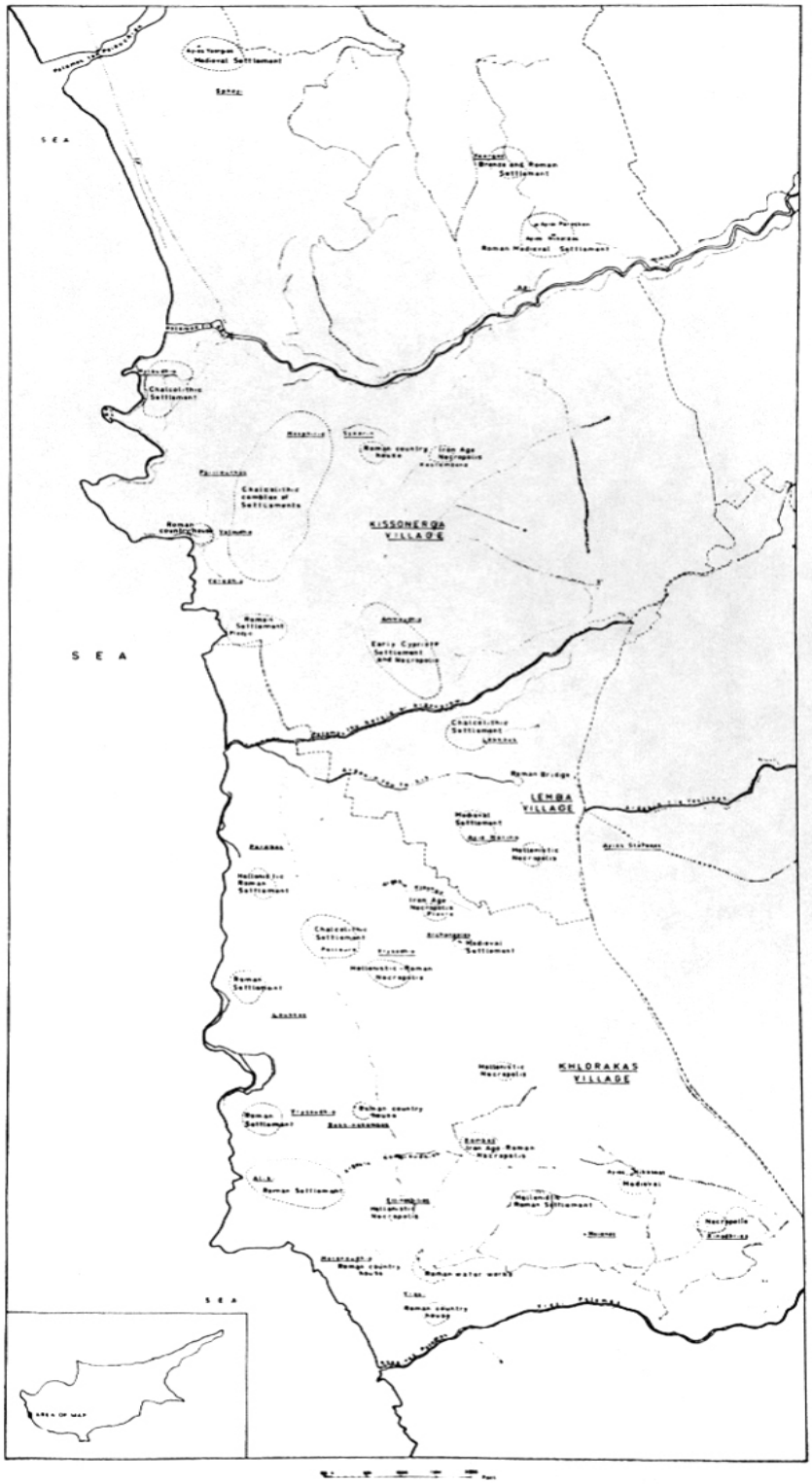
1: Upper map; indicating the general location of the Phlamoudhi survey area.
2: Lower map; Phlamoudhi suvey area.



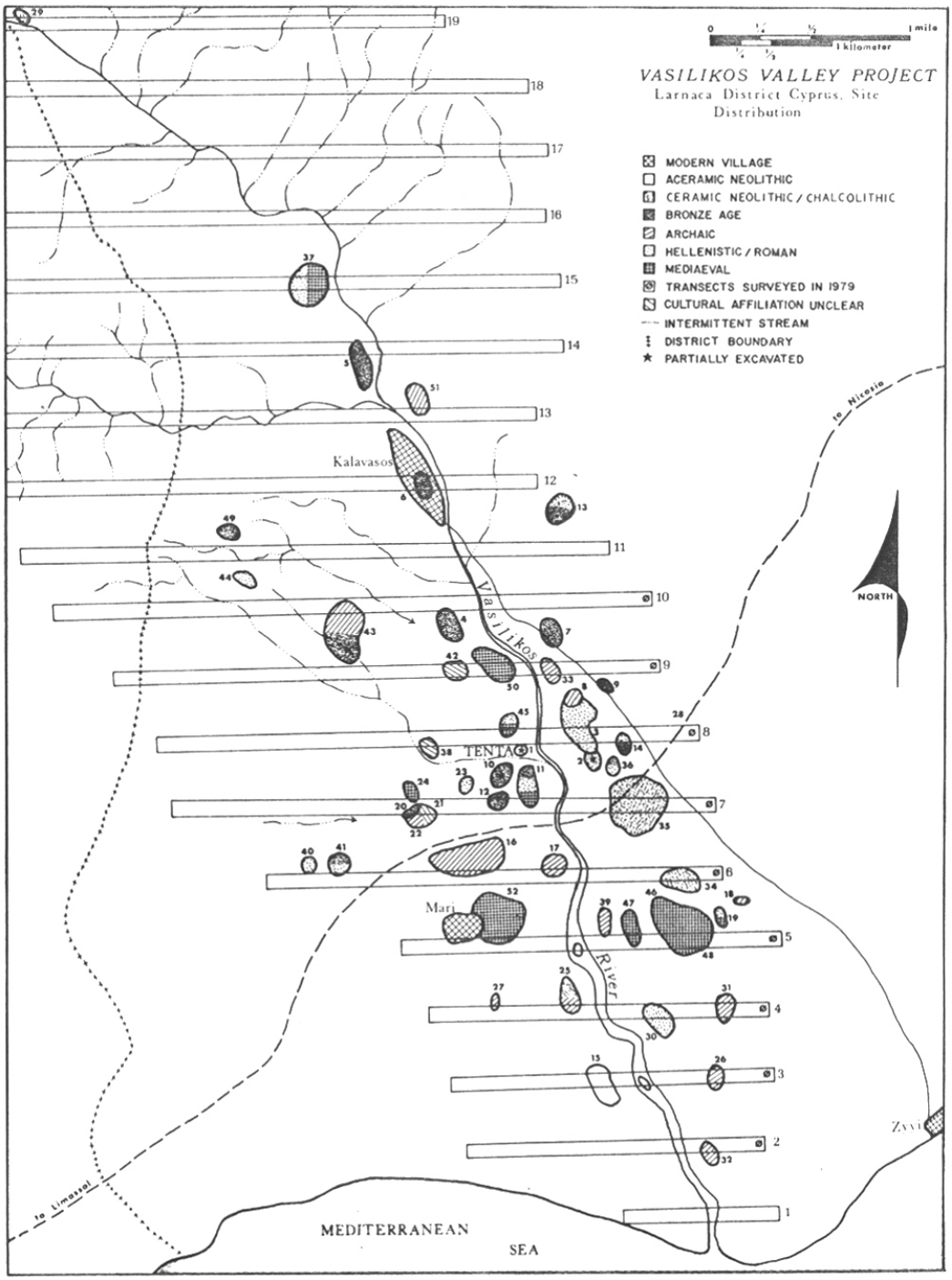
The Khrysokhou survey area.



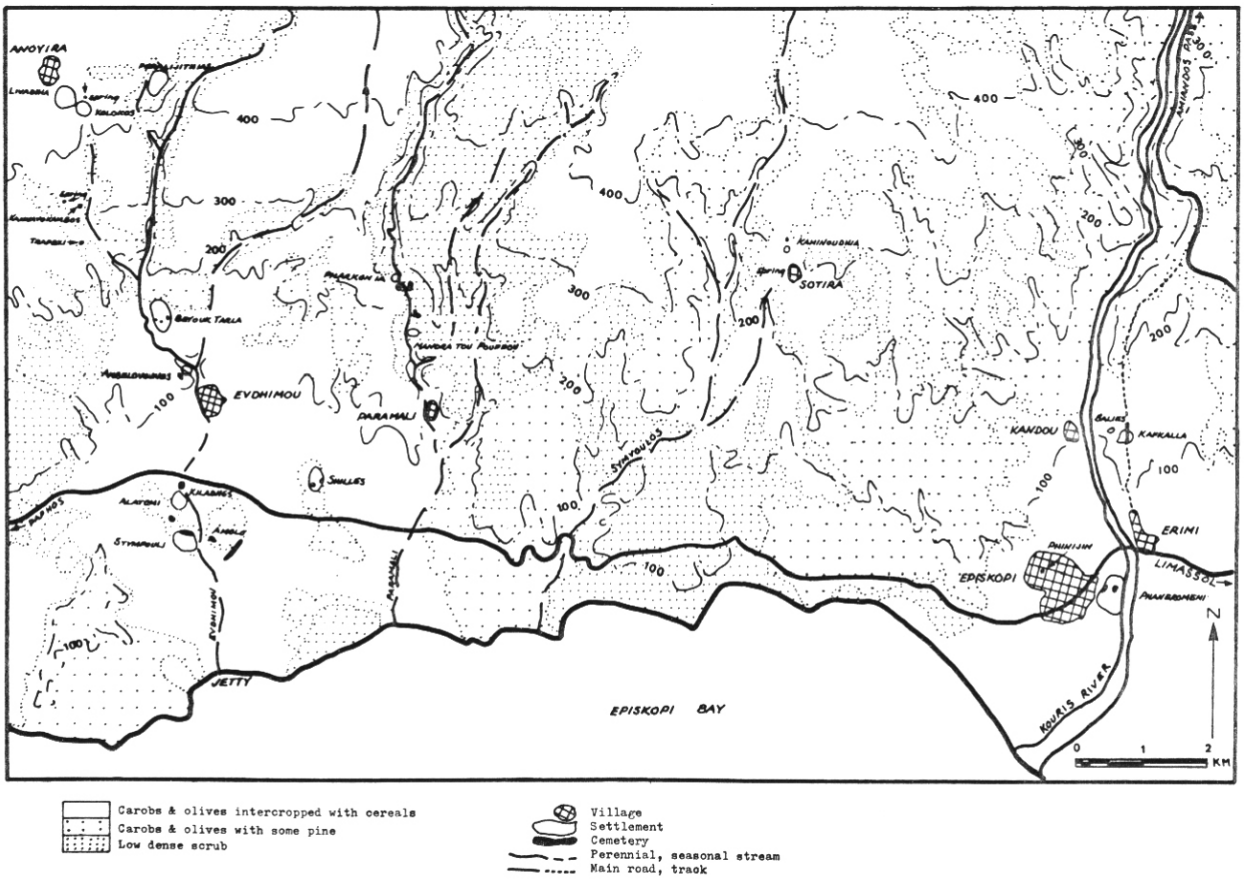
The Analiondas survey region.



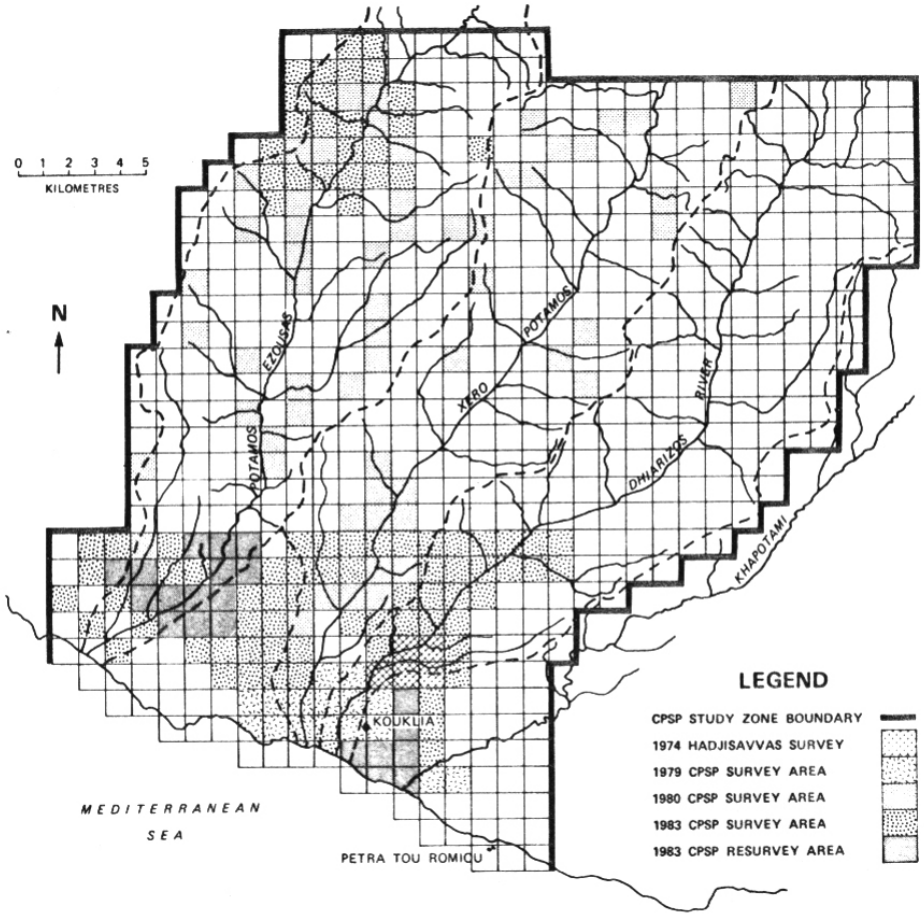
Hadjisavvas' Paphos survey area.



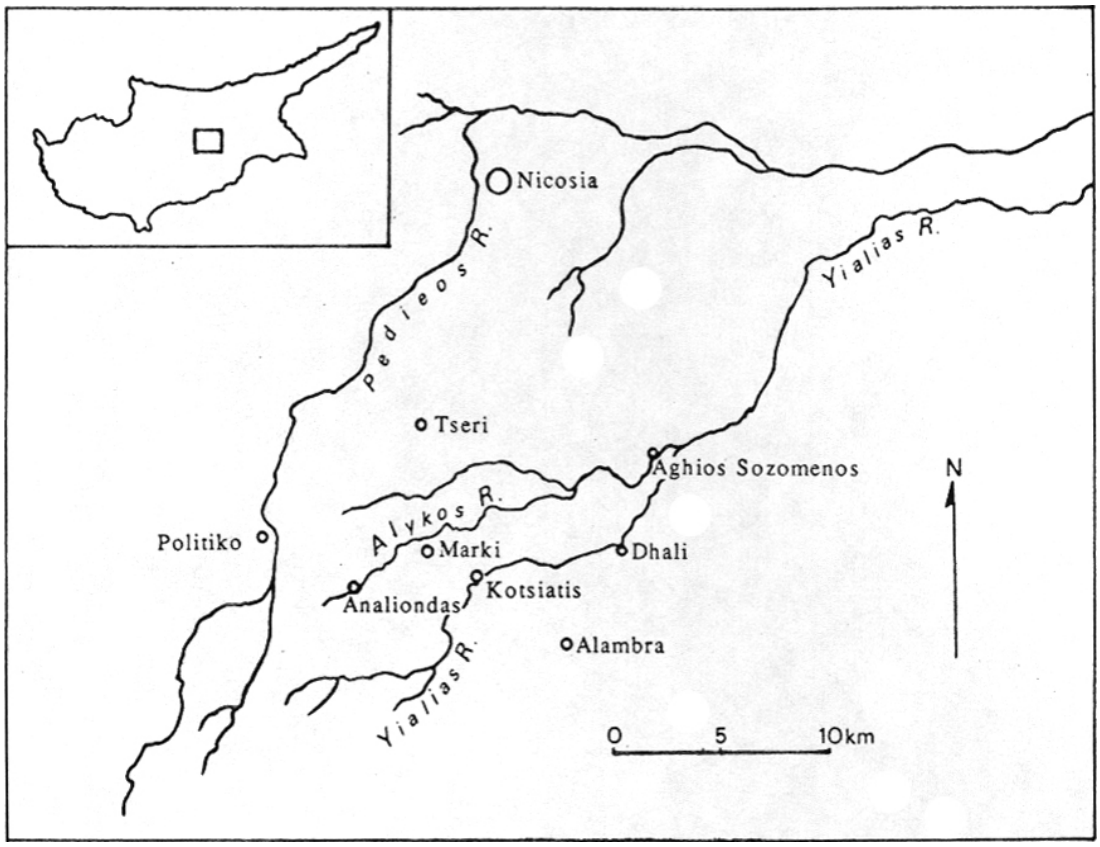
The Vasilikos Valley Project.

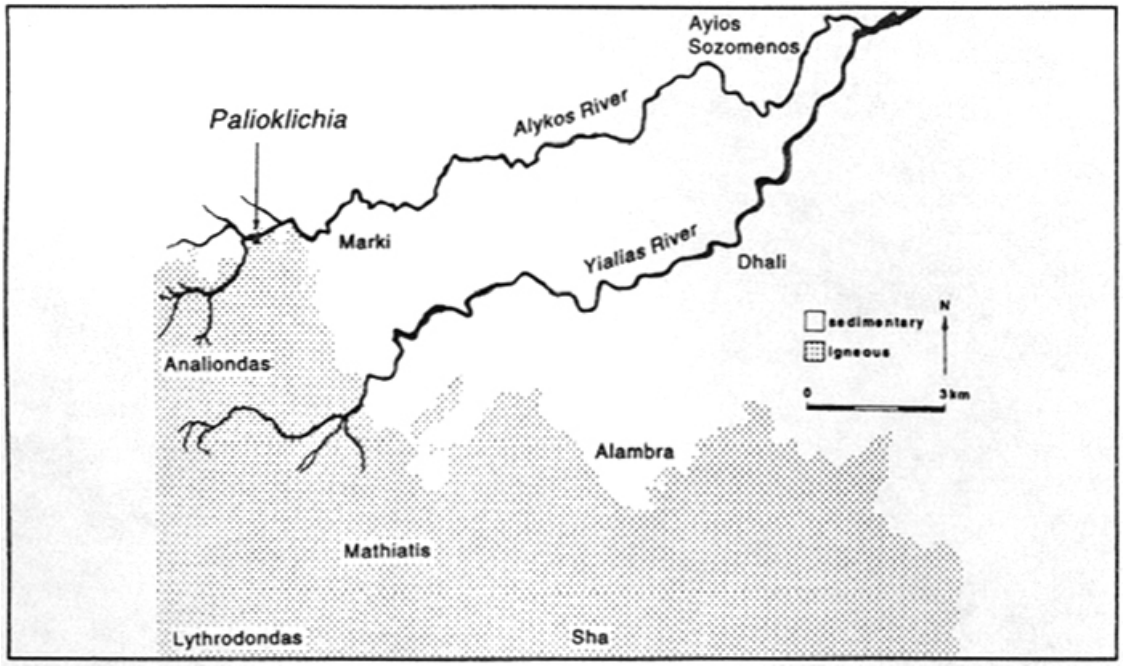


Survey in the Episkopi region.

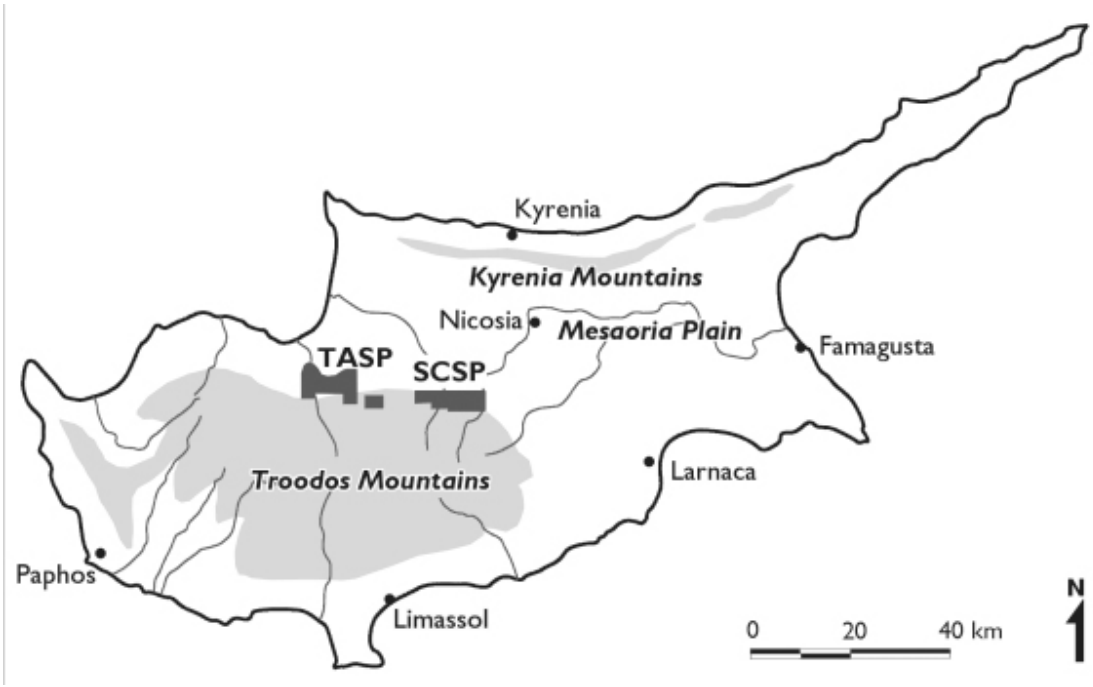


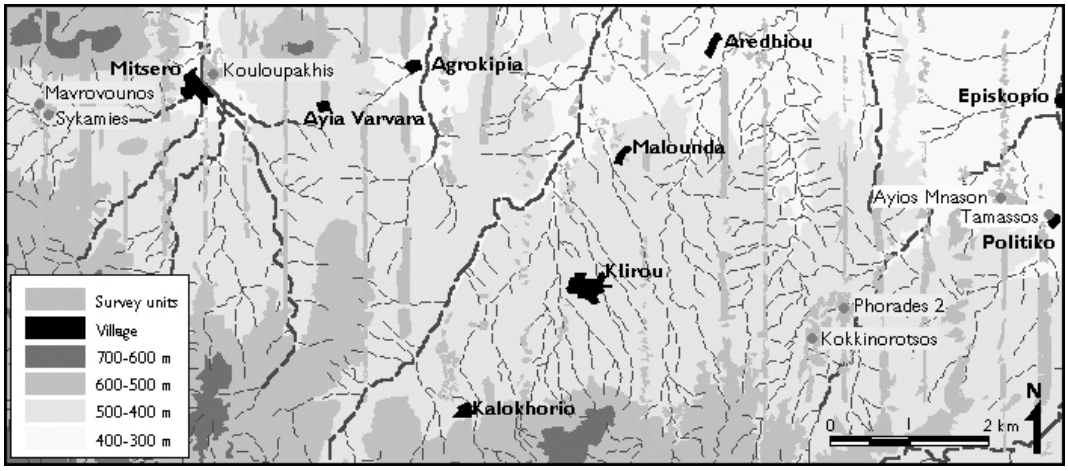
The Canadian Palaepaphos Survey Project area.



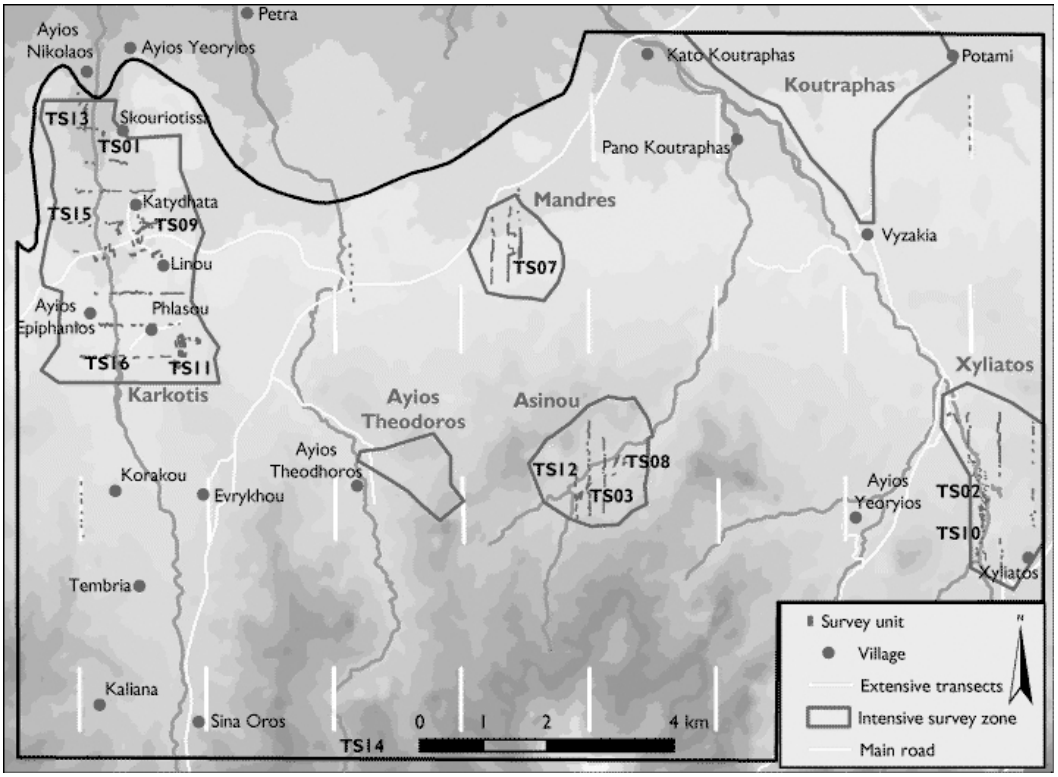


1: Upper map; The Australian Cyprus Expedition area.
2: Lower map; The location of Palioklichia.

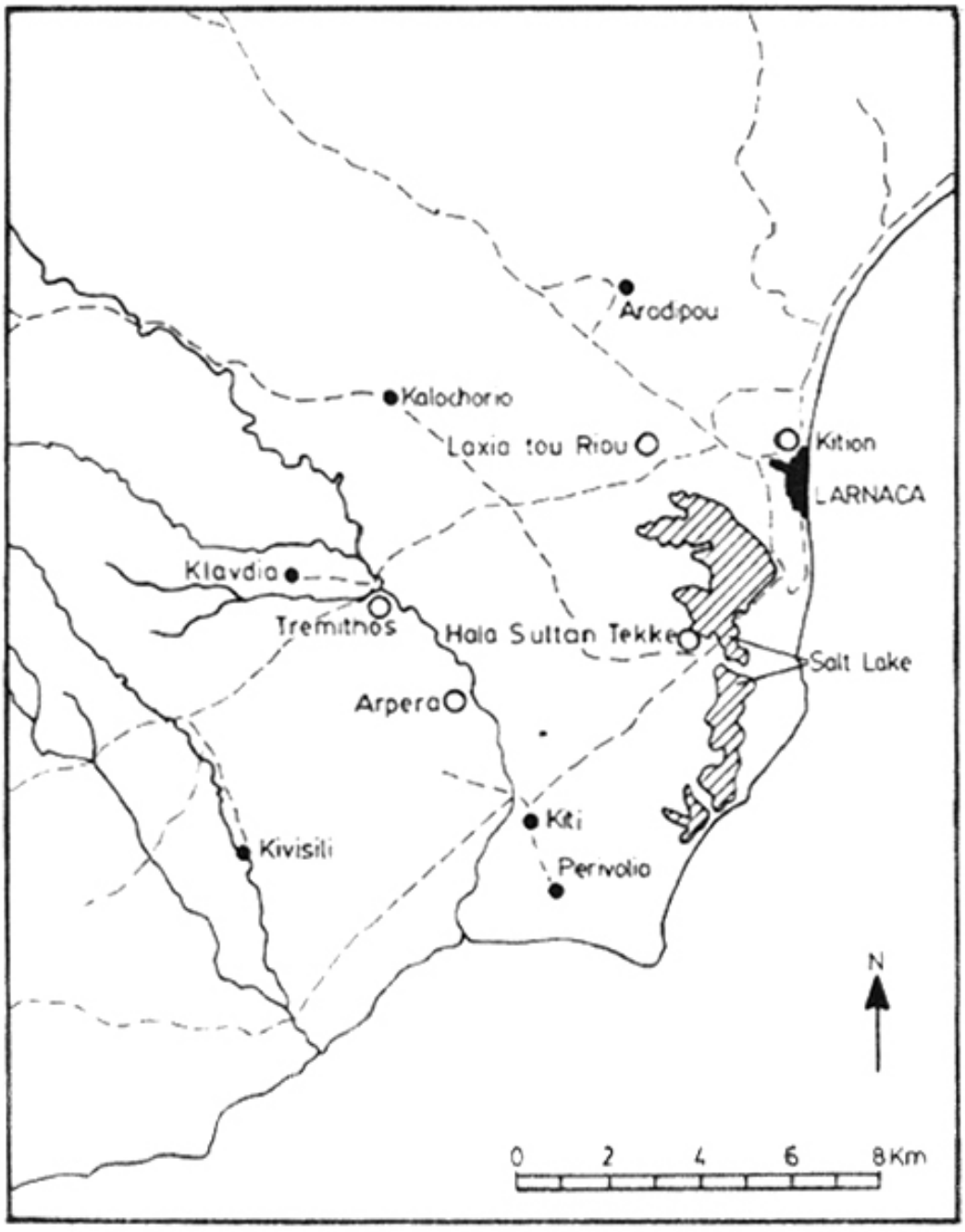




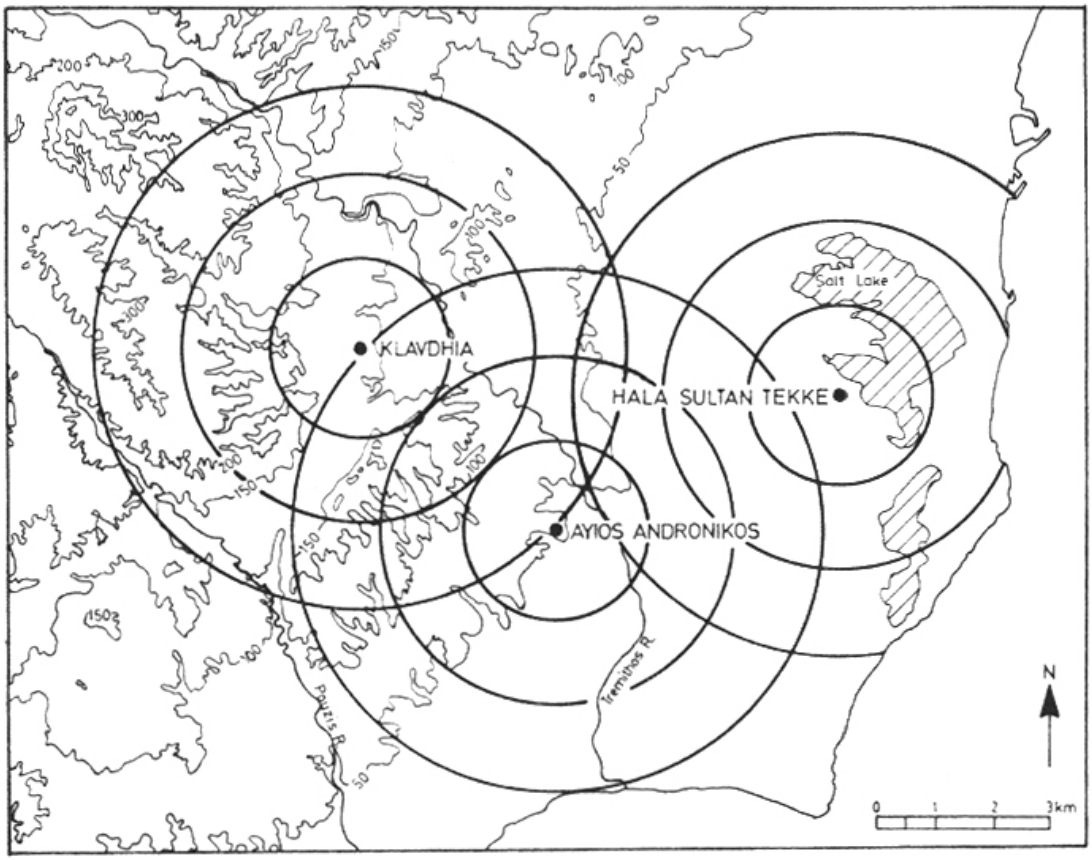
1: Upper map; General areas of TAESP and SCSP.
2: Lower map; SCSP suvey area.



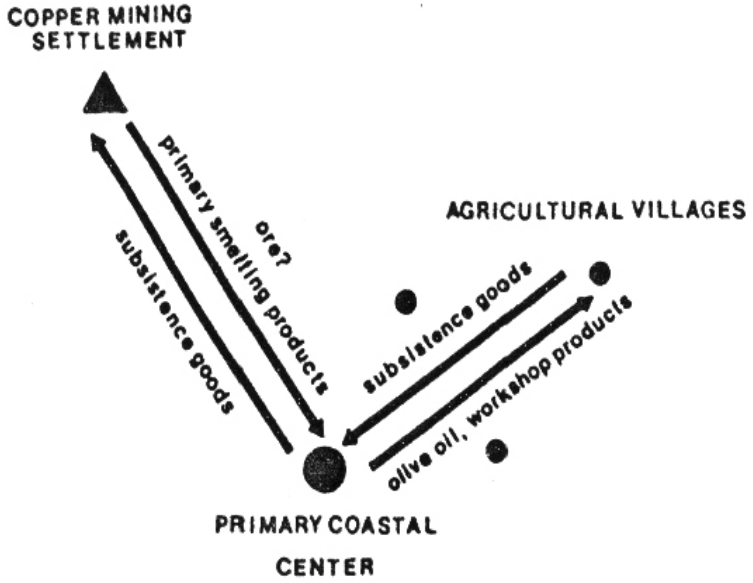
TAESP survey area.

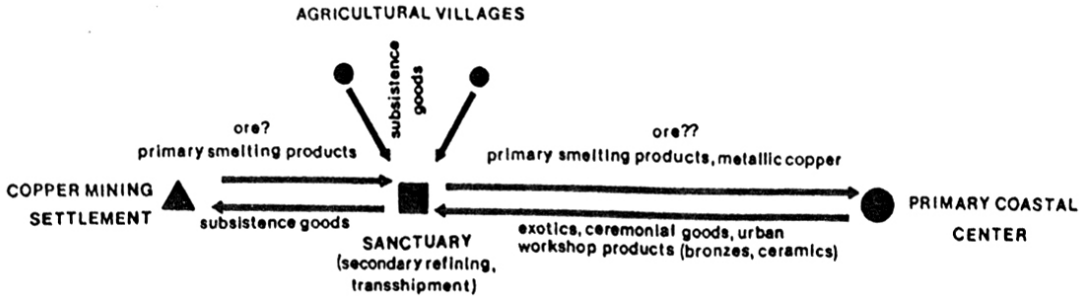


The Larnaka Hinerland Project area



Larnaka Hinterland catchment zones.The inner circle represents areas with a radii of ca. 1.5 km, middle circles represent areas with radii of ca. 3 km, and the outer cirlces represent areas with radii of 4.5 km





1: The upper model shows exhchange in polities where the primary center was near th copper source.
2: The lower model demonstrates exchange in territorially extensive systems or politie where the primary center was far from the copper source.